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NEW BUILDING, MEDICAL SOCIETY OF THE COUNTY OF KINGS.

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THE

Brooklyn Medical Journal

PUBLISHED MONTHLY

BY THE

Medical Society of the County of Kings.

JOSEPH H. RAYMOND, M.D., EDITOR IN CHIEF.
F. D. BAILEY, M.D., BUSINESS MANAGER.

ASSOCIATE EDITORS:
JOS. H. HUNT, M.D., DAVID MYERLE, M.D.,
WM. BROWNING, M.D.

VOLUME XII.

JANUARY-DECEMBER, 1898.

MEDICAL SOCIETY OF COUNTY OF KINGS,
356 BRIDGE STREET,
Brooklyn, N. Y.

ROONEY & OTTEN PRINTING CO., 114-120 W. 30TH ST., N. Y.

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THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

ENTERED AT BROOKLYN, N. Y. POST OFFICE AS SECOND CLASS MATTER.

EDITOR IN CHIEF:
JOS. H. RAYMOND, M.D.

BUSINESS MANAGER:
F. D. BAILEY, M.D.

ASSOCIATE EDITORS:
JOS. H. HUNT, M.D., DAVID MYERLE, M.D.,
WM. BROWNING, M.D.

VOL. XII. No 1. WHOLE No. 121. | BROOKLYN, N. Y., JANUARY, 1898. | Single copies 25 cents $2 a year, in advance

ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

THE NEW HOME OF OUR SOCIETY.

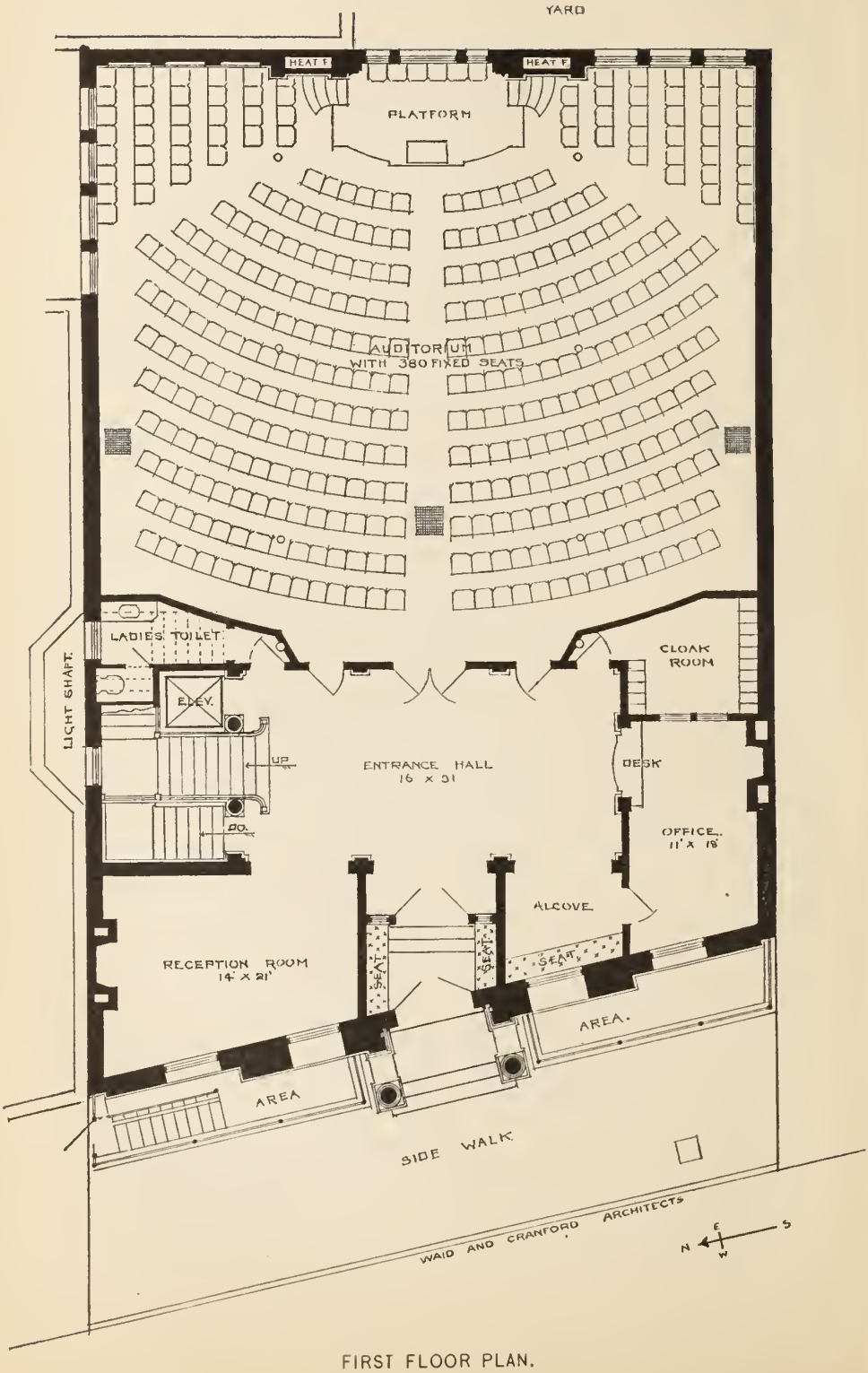
BY WILLIAM BROWNING, M. D.,
Secretary of the Committee of Five.

In presenting the architect's plans for our new building it may be opportune to give a brief sketch of the work so far done in this direction by the Society. It is not yet the time to fully and finally describe this movement of so much importance to the profession of Brooklyn; but in order most completely to enlist enthusiasm, and also to make the steps, so far taken, as clear as possible to all, an outline of the main features will, it is thought, be welcome.

The earlier days of the Society, the labors that resulted in the securing of our first home (the present quarters) ten years ago, are matters well known and already recorded. For details regarding these we can only refer the inquirer to our archives.

The subject in hand should presently be written up with due regard to all the details and with ampler acknowledgment of the invaluable aid accorded by so many of our noble members.

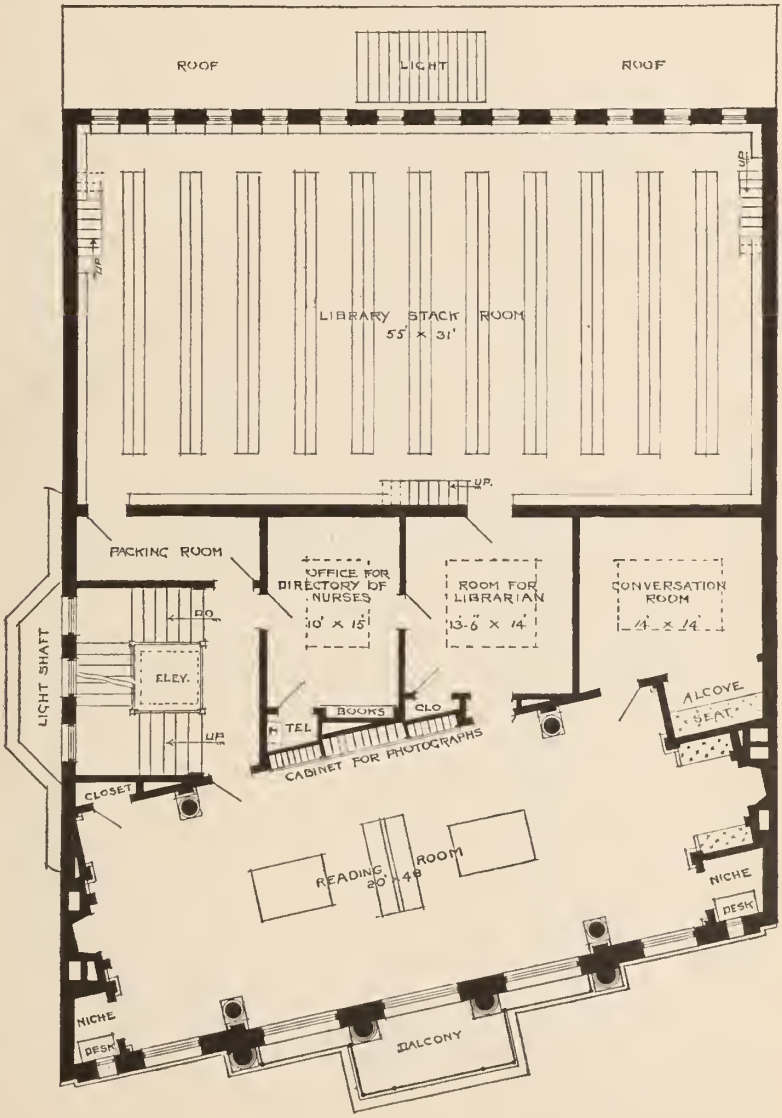
In the final report of Dr. Hunt, as Librarian of the Society (January, 1891), he stated that the library "already demands more room," and that it would be "wise to enlarge the building and give both the meeting-hall and library and reading-room



FIRST FLOOR PLAN.

larger accommodations." This was perhaps the earliest official warning that our quarters were no longer adequate. In the seven years that have since passed, this need has become more and more urgent. In the succeeding annual reports from the Library, the inadequacy and risk of our present place was steadily preached.

The first actual initiative in the effort to realize our present

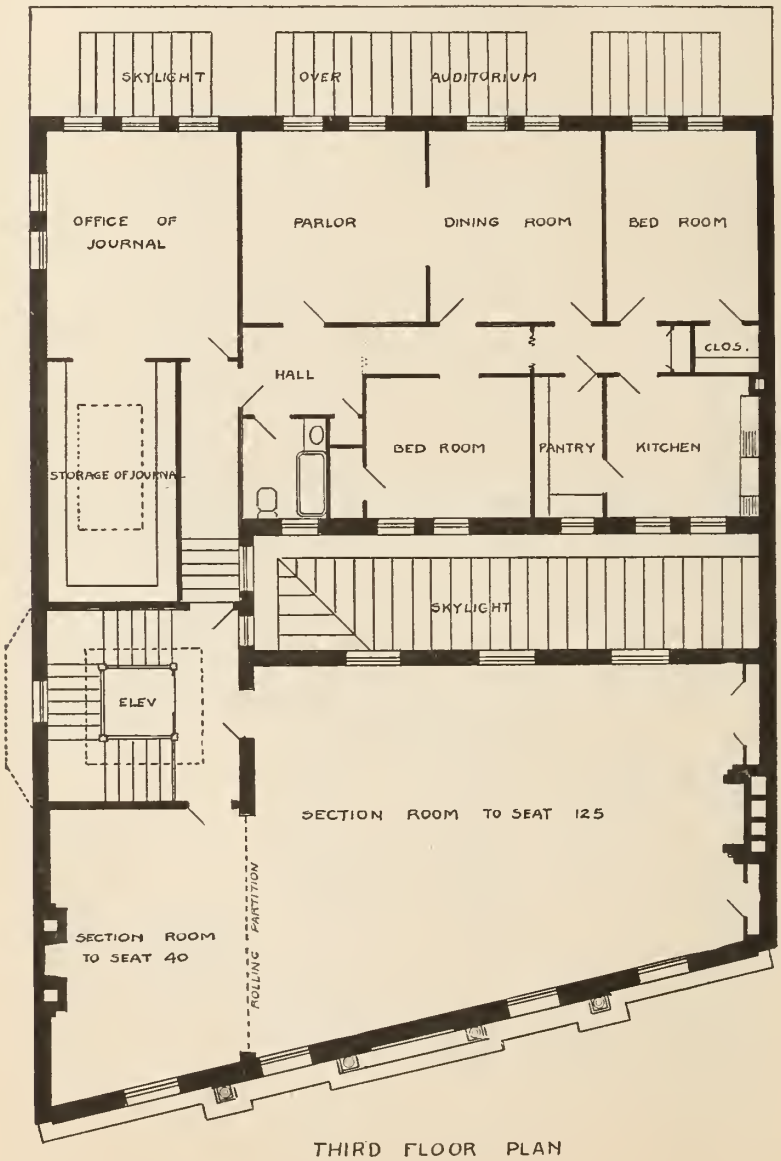


SECOND FLOOR PLAN.

plan was taken by Dr. McNaughton, who utilized an old privilege in making a President's Annual Address, April 17, 1894.

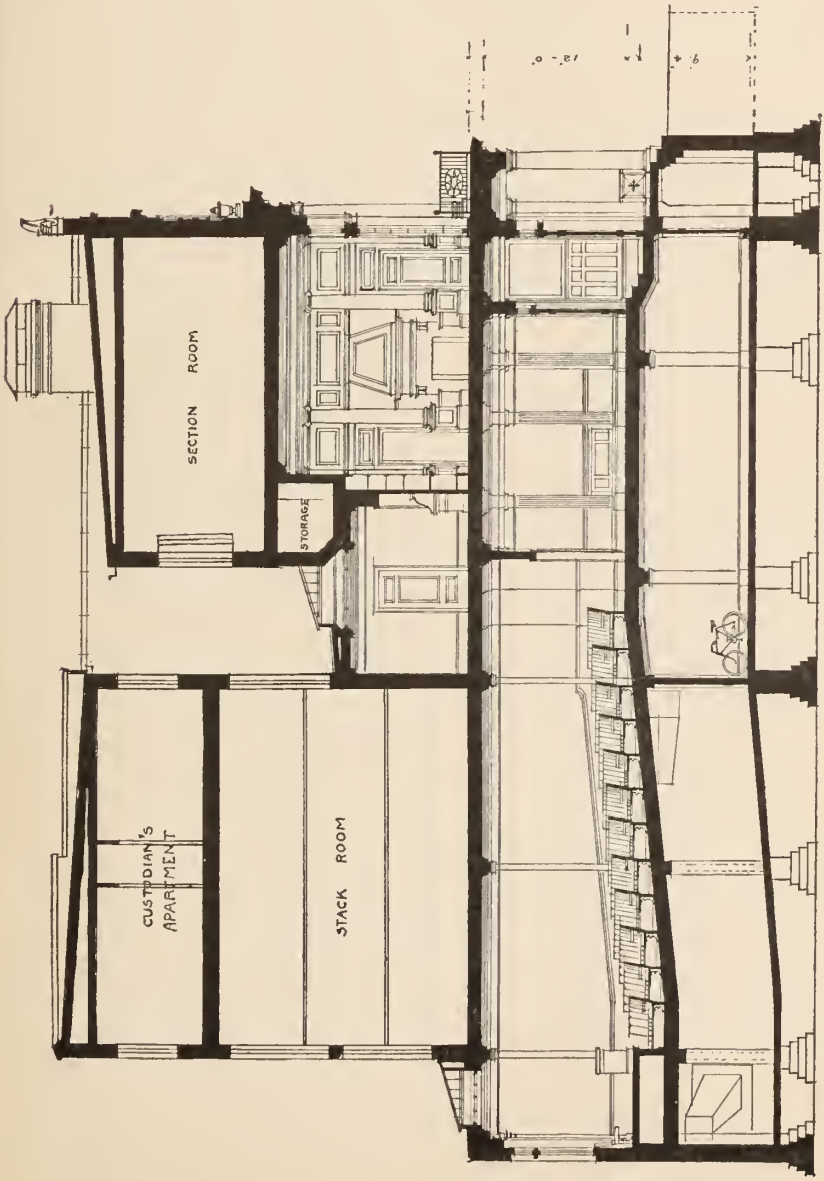
The committee of representative members which was appointed to consider this address, after rehearsing the then status of affairs, reported on this recommendation as follows:

"Your Committee believing the necessity for action at this



THIRD FLOOR PLAN

time urgent, and seeing that this is the Medical Society of the County of Kings, and desiring to suggest a plan that will be completely representative, would recommend that the President appoint two members from each of the Wards of the City and two members from each of the County Towns. These members to



LONGITUDINAL SECTION.

constitute a Committee on New Building, with power to consider and devise ways and means, site, building, etc., etc., pertaining to the same.

"Said Committee shall co-operate with the Board of Trustees and report from time to time to this Society."

The general scheme of this body, popularly called the Jumbo Committee to distinguish it from the sub- and joint-committees, originated with Dr. Maddren, who eventually became its Chairman. This Committee organized in September, 1894, with Dr. F. H. Stuart as treasurer, and Dr. Myerle as secretary. The first work which it undertook was the securing of subscriptions. This part of its labors has been continued with more or less persistency ever since, with the result that our total of promises now amounts to about $17,000, of which some $10,000 has already been paid in.

In 1894–95, a sub-committee, of which Dr. G. A. Evans was Chairman, canvassed the Society regarding choice of site, with the result that about an equal number were found to favor the Fulton and Flatbush junction *versus* some site farther uptown. This very important question eventually settled itself. No satisfactory location near the former region was found at any figure within our means. Moreover, the opening up of the Nassau trolley-system and the connection of the Brighton Beach steam road with the Kings County Elevated gave a good choice of sites in the Bedford region, central, accessible, and not too expensive.

For a time in the years 1895–6, there was a prospect of our securing the Lincoln Club property, but that organization eventually decided not to sell, and in the long run we shall be much better situated than had we secured their building.

By the spring of 1897, a sufficient amount had been raised and our work had become so far systematized that it was possible to go ahead and secure a site. The large committee authorized its chairman to appoint a sub-committee of seven to meet with the seven trustees and take the necessary steps. This joint body promptly authorized the President of the Society, the Chairman of the Jumbo Committee and the Chairman of the Board of Trustees to select and purchase a site, and instructed them positively to do so within a specified time. These gentlemen were heartily unanimous in their selection of the site on Bedford avenue opposite the armory. The price was $17,500, of which one half was paid down.

We were then ready to take up the matter of the structure to be erected. The joint-body appointed a final Building Committee

of Five, to familiarize themselves with all the details, adopt plans, and see the construction through to a finish. The five selected were Drs. Frank E. West, George McNaughton, William Maddren, Charles Jewett, and William Browning—each of these, as will be noticed, representing some leading interest of the Society.

The next move was to secure building plans. Mr. Frank Freeman was called to our aid as consulting architect. A general competition was invited. Some twenty sets of designs were offered, enabling us to secure plans of exceptional excellence, the first award going to the architectural firm of Waid & Cranford.

To carry the work along just as fast and far as our finances permit, we are already engaged in the preliminary task of excavating the lot and laying the foundations. Everything is now ready to proceed with the erection of the building proper as rapidly as the necessary funds are provided; and it is earnestly hoped that we may complete the whole this coming year.

That member must be callous indeed who does not look forward with lively anticipation to the early realization of our long labors.

The following is a description of the building by the architects, Messrs. Waid and Cranford:

The building, which is located on Bedford avenue near Atlantic, covers the entire property owned by the Society, and in plan is equivalent to a rectangle 59 x 85 feet. The construction is to be fireproof, with special provision for the safety of the library. As shown by the accompanying cuts of the drawings, the building has a basement and three stories, and may be described briefly as follows:

Front.—Colonial in design and executed in brick with stone trimmings.

Basement.—Since bicycles are now considered physicians' necessities, space is made available for storage for the convenience of any one while consulting the library or attending meetings. Approach is had from the exterior by a stairway and inclined plane. A toilet-room adjacent, is convenient also to the first-story entrance-hall. The heating- and ventilating-apparatus, coal storage, and elevator machinery occupy other parts of the basement.

First Story.—From Bedford avenue one passes through the main entrance and vestibule to the main entrance-hall which, being treated with some architectural pretension, gives the visitor a good first impression of the building. This hall serves as a

foyer for the auditorium which is entered through three doorways. At the right is an office, the desk of which commands a view of all entrances, also the stairs and elevator. Convenient to this same entrance hall is a reception-parlor, a ladies' room and a cloak-room. The auditorium will seat nearly 400 and is lighted chiefly from skylights extending across the building over the speaker's platform.

Second Story.—From the entrance-hall one ascends by elevator or stairs to the reading-room, which occupies the entire front of the second story. The ceiling is sixteen feet high, and the windows are large to give ample light. With the fireplaces, tables, the current-journal case, the card catalogue, a cabinet for photographs and rare books, three private study alcoves, etc., it can be seen that this room is designed to be the most attractive feature of the building. Adjacent to the reading-room is a conversation-room, a private room for the librarian, and an office for the directory of nurses. To the rear of these rooms is the stack-room, which has a capacity of about 100,000 volumes. The way in which the angularity of the lot is concealed, and the method of lighting the stack-room, and the rooms adjacent can be seen by studying the plans in connection with the longitudinal section. A mezzanine floor (not shown) above the packing-room gives space for a toilet-room convenient to the reading-room.

Third Story.—Quarters are provided for office and storage of the Brooklyn Medical Journal—the official organ of the Society. A convenient suite of apartments is provided for a librarian or custodian of the building, while the front half of this story is occupied by two large section-rooms, which can be used separately or in conjunction.

BROOKLYN GYNECOLOGICAL SOCIETY.

The following officers have been elected for the ensuing year:

President, J. C. MacEvitt, M.D.; first vice-president, Wm. H. Skene, M. D.; second vice-president, Frank Baldwin, M.D.; recording secretary, Frederick J. Shoop, M.D.; corresponding secretary, O. A. Gordon, M.D.; treasurer, L. G. Langstaff, M.D.; pathologist, W. H. Seymour, M.D.

TRAUMATIC RUPTURE OF THE TYMPANIC MEMBRANE.

BY WM. C. BRAISLIN, M. D.,
Assistant Surgeon in Ear Department, Brooklyn Eye and Ear Hospital.

The results of sudden impacts upon the external ear, or upon the drum, are interesting from several points of view.

We are sometimes met with the question, self-propounded or otherwise, "Is it possible to rupture the tympanic membrane without the contact of any foreign body with the same, leaving out of the question fractures of the bony tympanic ring?" Another question upon which we are sometimes in doubt is, "Does any abnormal, or pathological state of the ear previous to the infliction of trauma predispose to injury of the tympanic membrane?" Again, "How shall the existence of a pathological condition, previous to trauma, be determined?"

Bleeding from the ear usually occurs in fracture of the base of the skull. A fracture in this locality passing through the petrous portion of the temporal bone follows the line of least resistance and leads through some portions of the middle ear and external auditory canal. This almost necessarily involves a displacement of the bony ring of the tympanic membrane, causing rupture of the drum stretched across it.

Bleeding from the ear is usually looked upon as one of the important symptoms of fracture of the base of the skull. The demonstration of cases of bleeding from the ear due to trauma in which no such fracture exists is, therefore, an interesting comparison.

The following series of cases includes some in which rupture of the drum occurred, due to impact upon the external ear, without the contact of a foreign body with the drum membrane. (Cases I., II., III., V.) Rupture of the tympanic membrane through the intervention of a secondary medium is somewhat analogous to *contre-coup* fracture of the skull. In the case of the membrane, however, rupture seems to be caused by the direct expansion of the air compressed within the auditory canal by the impact of the blow; while in *contre-coup* fracture the strain is conveyed by an entirely different method along the surfaces of the skull to a point opposite that of impact.

Symptoms.—The subjective symptoms of rupture of the tympanic membrane are:

Pain.

Bleeding from the affected ear.

Impairment of hearing.

Tinnitus.

The history of trauma.

These symptoms are also common to fractures of the petrous portion of the temporal bone which lead through the middle ear and drum, and are usually present in fractures of the middle cerebral and occipital fossæ.

Severe constitutional disturbance, however, is absent in rupture of the tympanic membrane alone. Consciousness is not disturbed. There are no symptoms of compression, though there may be some shock as in Case V. Secondarily, suppuration which may persist for some time may ensue. This symptom alone in Case VI. brought the patient for treatment.

Prognosis.—This depends upon the state of the ear previous to the injury and the damage inflicted upon surrounding parts synchronously with the perforation. It may be confidently expected when the injury is limited to the membrane, and where no suppuration ensues, that treatment will restore the hearing power to a degree as good as before the injury. In many cases of traumatic perforation impairment of hearing has preexisted, and this should be borne in mind in giving a prognosis. Many whose hearing ability is decidedly less than normal are not themselves aware of their deficiency in this respect. It is the experience of every one who treats the ear to find that hospital patients especially claim excellent ability for an ear with hearing only $\frac{2}{7}$, $\frac{1}{7}$, or even less than these fractions of normal hearing.

After the occurrence of a condition such as impacted cerumen or eczema meati, which leads him to seek treatment, the patient often for the first time is made aware of his condition.

Every case of traumatic perforation should be subjected to a course of treatment after the perforation has healed. In this event it is possible that the hearing power may be made better than before the injury in cases where untreated middle-ear disease antedated the injury.

Diagnosis.—This is made on the history of the patient and the objective findings in the ear.

The history of a severe blow against the external orifice of the auditory canal, followed shortly by the appearance of blood, and

more particularly by the startling whistle imparted by air rushing through the newly made perforation on blowing the nose, when no whistle had existed before, gives evidence of the condition we are considering. The perforation whistle may be absent, however, or only elicited with artificial inflation. Impairment of hearing is more or less marked and usually tinnitus is present.

Ocular inspection with head mirror and speculum reveals blood, in recent cases, either dried in the canal or still liquid, and a perforation of the tympanic membrane.

In older cases no blood may be present if suppuration has supervened. In this case there is pus or only a history of bloody discharge. No perforation may appear on examination, since if suppuration does not supervene, the perforation may have already healed; but dried blood will then appear on the walls of the canal, and perhaps at the line of rupture.

Treatment.—Little treatment is called for when the rupture is recent and suppuration is absent. If the ear is discharging pus, the treatment is that of an acute middle-ear suppuration.

In nearly every case coming under my observation the opposite ear has shown evidence of chronic non-suppurating middle-ear disease, offering indirect proof that a like process also existed in the other ear previous to the trauma.

There is evidence to show that a perfectly normal ear is markedly resistant to the impact of suddenly expanding compressed air.

Dr. A. H. Smith, the medical officer in charge of the men employed in the caisson during the laying of the foundations of the Brooklyn Bridge, found that in several instances rupture of the drum membrane occurred due to the pressure of the compressed air which is maintained in these chambers.* He believes that in every such case some obstruction existed previously in the Eustachian tubes.

In my own mind, I question whether the air of the auditory canal could be so compressed by the impact of a blow as to rupture a perfectly normal drum-membrane. By direct contact, of course, a foreign body is readily forced through the membrane.

Experiments on the cadaver show that the normal drum-membrane resists a sudden force of four or five atmospheric pressures.†

In the following cases there was found on examination evidences of preexisting ear disease:

* Prize Essay: "The Effects of High Atmospheric Pressure."
† Gruber, "Text-book of Diseases of the Ear."

Case I.—Anthony Dalton, a longshoreman, forty-eight years of age. While at work in a ship on the day before presenting himself at the Brooklyn Eye and Ear Hospital, this man received a glancing, but sharp, blow on the left side of the head and ear from a bale of wool weighing six hundred pounds which was being lowered by a derrick into the hold. He was knocked down but got up and went on with his work. Fifteen minutes later blood began to trickle from his left ear, but he kept on with his work the remainder of the day. When I saw him he heard somewhat less than formerly; some tinnitus was present. Watch (normal distance seven feet), was heard, *viz.*: Right, ten inches; left, contact. The left meatus was bloody. Part of the blood was inspissated, the remainder fluid. The left tympanic membrane presented a slight pouting just behind and below the umbo, from which blood still slowly oozed. From this point a pink line extended forward in line with the lower border of the membrane, already healing. A line of fresh blood was contained in the sulcus formed by the floor of the canal and the lower border of the tympanic membrane. The following day all oozing had stopped and the rupture had healed. A small triangular depression just below the umbo represented the point of bleeding (apparently pouting) of the day before.

Case II.—E. P., a schoolboy, was struck directly on the left ear with a snowball ten days before being brought to me. For one hour, following the blow, pain was severe. There has been none since. A few days after receiving the blow his mother noticed that, when he blew his nose, he held his ear. He said he had to do so, or it whistled. This whistling, he told me, he noticed within five minutes of the time he was struck, for as he cried with pain he also blew his nose and he at once noticed the whistle. He heard the watch $\frac{3}{7}$ normal with the opposite ear and thirty inches with the injured ear. The canal was normal. A triangular opening was seen, its base lying along the lower border of the membrane and its upper angle just below the umbo. The perforation healed in a few days.

Case III.—Helen Kidney, thirty-five years of age, one week previous to my seeing her at the hospital, was struck on the right ear with a closed fist. She had depended more particularly on this ear for hearing as the left ear is greatly impaired. Marked loss of hearing followed this occurrence, together with tinnitus. Inspection revealed a small perforation located in Shrapnell's membrane, with considerable surrounding congestion. The rest

of the membrane was apparently very lax. Healing took place after the lapse of several days.

Case IV.—July 13, 1896, John Morse, age nine months, was brought by his mother to the Eye and Ear Hospital with the following history: Five days previous the mother had attempted to remove ear wax from the baby's right ear with a hair-pin. A copious flow of blood from the ear frightened her and led her to desist. The baby slept poorly the night before coming to the hospital, and the mother was advised to visit us.

Inspissated blood covered the walls of the canal. A small puncture of the membrane in its anterior superior quadrant appeared nearly healed.

Case V.—Charles Jansen, nineteen years of age. Three months ago a friend in rough sport clapped his hands simultaneously over both ears. He was aware of a loud report, but for five minutes he was unable to hear anything or to realize his surroundings. He slowly improved for a time, but now for several weeks the hearing has remained about the same. He complained of occasional severe tinnitus. He also said that before receiving the blow his hearing had been unusually acute. He stated that he always heard fire-engines, etc., before any others who happened to be with him.

Hearing distance, watch: Right, three inches, left, one-half inch. Bone-conduction for tuning-fork (512 vibrations per second) was better than air-conduction. Both canals were normal. The right tympanic membrane showed a fairly large, dry, perfectly circular opening in the anterior inferior quadrant. Left tympanic membrane, moderate retraction, marked opacity. No light reflex.

Notwithstanding this patient's testimony that his hearing had formerly been good, I am inclined to think it had not. It is probable that it had been worse since the accident. That the perforation was caused by the impact of condensed air I have no doubt. There was doubtless, also, considerable shock at the time. But the condition of the non-perforated drum-membrane is not that of traumatism, but of chronic degenerative changes. It is likely that the same condition preexisted in the ear now showing perforation, and doubtless predisposed to the injury sustained. Boxing the ear, which must almost invariably result in injurious effects, though it be nothing more than a temporary congestion, is always to be emphatically deprecated. A severe blow on the ear will, as we have seen, sometimes rupture an already degenerated or greatly retracted membrane. In the latter condition the mem-

brane is usually abnormally tense. The partial exhaustion of air from the middle ear such as occurs in chronic inflammation of the tympanum and Eustachian tube, causes the drum to be drawn inward and rendered more tense than normal by the pressure of the normal atmosphere from without.

Case VI.—Elizabeth O'Neill, twenty years of age. On February 5, 1897, this patient presented herself at the Eye and Ear Hospital. She stated that for seven years she had suffered with intense itching of the ears which she was accustomed to relieve with the head of an ordinary pin. Six days previous to consultation, while thus engaged with the right ear, she experienced a sudden, sharp pain. Since then she had suffered from occasional discomfort, a feeling of fulness, and a considerable discharge. The canals were excoriated and were the seat of an eczematous inflammation. A small perforation existed, the size of a pin-head, in the lower anterior quadrant of the right membrane. The presence of inflammatory material in the canal, the result of the eczema, had probably supplied the infection, which entering the perforation had set up acute suppurative inflammation of the middle ear. Under treatment the discharge ceased and the perforation healed in a few days.

Case VII.—Mr. H. This gentleman called to see me on the evening of July 19, 1897. Ten minutes before his little child, a few months old, had in mischief poked the end of a match into his left ear while he was sleeping. He was awakened as if by a crash, but felt no particular pain. He knew something was the matter with the ear, and putting up his hand found the match. Hearing distance for the watch, R. $\frac{4}{7}$, L. 6″. Tuning-fork was heard better with air-conduction. In the left canal there was found a good deal of bloody serum. The left membrane showed a red, pouting point just below the umbo. The sound conveyed by the auscultation-tube was characteristic of the condition under consideration.

The next day the whole membrane appeared somewhat reddened at the central and lower portions. A slight amount of bloody serum was still proceeding from the perforation which was already healing. Three days later the perforation healed, but the impairment of hearing was complained of for some days later.

It seems possible to sum up the leading points of the present paper on "Traumatic Perforations of the Tympanic Membrane" as follows:

1. The drum may be ruptured without direct impact of a for-

eign body upon the membrane, *i.e.*, by the expansive force of air condensed within the auditory canal.

2. A preexisting middle-ear disease predisposes to such traumatic perforations.

3. The presence of a middle-ear disease previous to the trauma is determined inferentially by the present condition of the opposite ear.

4. Prognosis regarding the healing of an uncomplicated perforation is good.

5. Severe tinnitus may be a result of labyrinthine concussion, and prognosis regarding the outcome of this symptom must be guarded.

6. Treatment is largely expectant until the perforation itself is healed.

7. In most cases, after this has occurred, additional treatment directed to the middle ear is beneficial.

TETANUS: ITS GEOGRAPHIC DISTRIBUTION, ITS PROPHYLAXIS, AND ITS TREATMENT; WITH REPORTS OF CASES.

BY CHARLES H. GOODRICH, M.D.

Abstract of Paper read before the Brooklyn Surgical Society.

Under general geographic considerations the frequency of the disease in the tropics and its infrequency in cold climes was mentioned. Reference was made to the equine theory of the origin of tetanus and its overthrow by experiments in the New Hebrides Islands by Le Dentu. The details of geographic distribution were taken up. Asia was first considered, then Africa, Europe, and the British Isles. The districts in South America seemingly infected were then mentioned (Brazil, Argentine Republic, Peru, and Ecuador). The fearful prevalence in Cuba, Jamaica, and parts of Hayti were mentioned. In Mexico, Yucatan, and the region about Vera Cruz were indicated as possessing badly infected soil. The disease is also prevalent in Central America. The literature dealing with the prevalence of the disease in various regions of the United States was reviewed, and some skepticism was expressed as to the bad record of southern and eastern Long Island.

Under prophylaxis were mentioned the desirability of the thor-

ough cleansing of fruits and vegetables fresh from gardens, the discarding of bandages which have been dropped upon the floor, and special attentions to slight wounds. A standard method of treating recent wounds was presented. Iodoform, silver-nitrate solutions, and tincture of iodin, were mentioned as anti-tetanic medicines for use in wounds. As novelties among preventive measures were offered:

1. Disinfection of excreta.
2. Free incisions of punctured or lacerated wounds.
3. The use of hydrogen dioxid as an antagonist to the tetanic virus.
4. The taking of cultures and the making of experimental inoculations from the dirt in a recent wound, to be followed by wound excision if the germs or the disease is produced.

Twelve cases heretofore unpublished were presented.

Therapeutics.—Two hundred and thirty-nine cases of tetanus were studied so as to compare the results of antispasmodic medication, and treatment by antitoxin. The former showed sixty-four per cent. of cures, and the latter sixty-three per cent. among reported cases. Yet judgment by these figures seems unfair because the majority of cases treated by antispasmodic drugs (the fatal cases) are not reported. Amputation was mentioned as highly recommended by Ross. The eight cases of the series treated by this method all died. Cauterization, wound excision, and neurotomy were mentioned as uncommon methods of treatment worthy of consideration. A few cures in cases treated by hypodermatic injections of weak carbolic-acid and bichlorid-of-mercury solutions were recorded.

DISCUSSION.

Dr. A. T. Bristow said that it had fallen to his lot a few years ago to make a laboratory study of tetanus, and he had made many inoculations in animals with tetanus derived from various garden earths, from pure cultures, and from actual cases of the disease. As Dr. Goodrich had stated, he had made successful inoculations from the soil of his own garden, which is sandy, and also from that of an adjoining garden which has a rich black soil. He had been more uniformly successful, however, with the richer soil than with that which was sandy. In general, it may be stated that soil which has been impregnated with animal matter is more likely to be the habitat of the tetanus bacillus than earth which is free from such contamination. A number of years ago he brought forest soil from the foothills of the Adirondacks, and from the

wooded shores of Lake Champlain, and used this for the purpose of determining whether it contained the bacillus of tetanus. Although he made many experiments he was never successful in producing the disease from this source. It seems, therefore, that the bacillus needs for its viability a certain proportion of animal matter in the earth. Other observers have recorded similar experiences with forest soil, and Nicolaier, the discoverer of this organism, states that even where it is found in the soil it only exists in the superficial layers and not in the deeper strata. The bacillus may be recovered directly from the soil, but this is a matter of much difficulty and uncertainty and the method of inoculation is that generally practised. A punctured wound is made at the root of the tail of a mouse, and into the depths of the wound is introduced a small quantity of garden-earth. The small puncture is then sealed with collodion. Usually in about forty-eight hours the mouse shows the first symptoms of the disease by hyperextension of the hind legs, which are stretched out behind as far as possible and remain in a state of constant rigidity. More rarely this spasmodic contraction extends to one of the fore legs. He has never observed all the extremities to be affected, nor has he ever noticed anything like the convulsive phenomena which appear in the human subject. Rabbits suffer from severe convulsions. A few hours after the appearance of the first symptoms the animal dies. To obtain a pure culture the pus from the wound is inoculated into a tube of nutrient medium, and this is then kept for an hour at a temperature of 80° C. In this manner other organisms present as a result of a mixed infection are destroyed, and the spores of tetanus which are able to survive this heat are left isolated. A stream of hydrogen is then run through the tube for half an hour, and while this is flowing the tube is sealed by the blowpipe. The tube being then put in an incubator a growth of tetanus appears in about four days. Contamination with the organism of malignant edema often occurs. The most virulent culture that he ever observed was one that was made from a wound from a person who died of the disease. The specific symptoms of tetanus are due to a toxalbumen, the product of the bacteria, which is probably a ferment. It is difficult to explain certain facts in connection with inoculated tetanus in any other way. The organism has never been recovered from the blood, nor has it been found in any of the organs, neither can it be discovered in the wound of entrance after a few hours. This is as true of the acquired as of the inoculated disease. Nevertheless, tetanus can

be produced by inoculation in a susceptible animal with the blood of an animal that has died of the disease, although it is impossible to get a culture of the organism from the identical blood that has produced the symptoms of the disease. The supposition that the toxalbumen is a ferment seems to explain this fact. This peculiarity of the organism has a bearing on some points in treatment. If it be true that the poison which produces the nervous symptoms of the disease is an enzyme, and once introduced into the blood goes on propagating itself, of what possible use is amputation of the part, or nerve-stretching? It has been stated that the tetanus bacillus requires to be protected from the influence of oxygen in order to grow. This explains the ill-reputation of wounds of the hands and feet. Such wounds are usually punctured wounds, and made by splinters, nails, glass, etc., which have been in contact with the soil and are thus likely to convey the spores of tetanus into the depths of the little wound. As a consequence of the rapid closure of the small wound, the spores are placed in the most favorable conditions for their development. They are shut off from the oxygen of the atmosphere and supplied with nutriment and a suitable temperature. Much more difficult is it to explain the occurrence of tetanus in operation-wounds as in the cases narrated by Dr. Goodrich. Still more difficult to account for are those cases where the disease has occurred in connection with no wound save that which a large ulcer of the leg presented for the entrance of the germ. This was the apparent origin of the first case that the speaker ever saw. Similar cases have been reported where the disease occurred as a result of the exposure of open wounds to the soil of battle-fields. So in another case which he saw, the patient had been caught in a railroad turntable and the dirt ground into the tissues of the limb which was promptly amputated. Tetanus, nevertheless developed. It is not easy to see how the organism had in such cases been protected from the oxygen and placed in the position required by an anaerobe. Such cases are not uncommon, and difficult of explanation. To these anomalous cases belongs that cited at the commencement of the paper, in which several persons are said to have died of tetanus after eating the flesh of a bull that was supposed to have died of the disease. As the poison of tetanus is destroyed by a temperature of 65° C., and as it is assumed that the flesh of the animal was not eaten raw, it is difficult not to doubt the whole story. With regard to the feasibility of making a diagnosis of tetanus infection before the disease has developed, there seem to be obsta-

cles in the way. In the case of diphtheria, it is possible to make a diagnosis bacteriologically in twelve hours. Not so, however, in the case of tetanus, the bacillus of which requires from three to four days to develop. An early case of tetanus would be well under way before it would be possible to determine from the culture whether the original wound was infected, and as the only certain test of a culture is that by inoculation, to the time which it took the culture to grow must be added the period necessary for the test animal to show the characteristic symptoms. The use of tetanus antitoxin is at present most disappointing. The speaker had seen but two cases in which it was used, but they both died. Nochard of Paris, in a paper read at the recent convention at Moscow, epitomized the present status of serum-therapy of this disease as follows: Antitoxin will not cure a case of tetanus after it has developed. It will, however, always prevent tetanus if used before the onset of the disease. It should always be used in conjunction with other remedies after tetanus has developed, as it then shortens the attack. The group of symptoms which we call tetanus are far from being entirely elucidated by the discovery of Nicolaier. There is a striking lack of uniformity in the period of incubation of the clinical cases, whereas, in the laboratory the period of incubation is almost constant, rarely taking more than forty-eight hours to manifest itself. Then again, tetanus develops in wounds that do not seem to render the microbe anaerobic, as in the cases cited. It is not impossible that the symptom group may be due to more than one cause, and that at times it may be the result of nerve-irritation purely, and originate like convulsions in children or in hysterical women, or like those cases of spurious hydrophobia called lyssophobia.

Dr. J. S. Wight said that he had seen a very large number of cases of tetanus in the army, and in this city. He had seen but one case get well. Since the more complete and perfect introduction of antiseptic treatment he had seen only one or two cases; before that they were very common. Twenty-two years ago last spring he predicted, in practically the same words, that tetanus would turn out to be a disease of microbic origin.

Dr. J. P. Warbasse said that he should like to say a word concerning Dr. Goodrich's observation as to prophylaxis.

The writer of the paper recommends that the discharges from the patient should be destroyed, as is the practice with certain other of the infectious diseases. It seemed to the speaker, that although this had a theoretically sound foundation, still, when we

consider the widespread dissemination of this organism, and the wide distribution of the disease, to destroy the discharges from one single patient suffering from tetanus, discharges which would simply enter into the vast amount of already existing tetanus organisms present, would be of infinitesimal practical value. This would seem to be a procedure scarcely worthy of the pains, and to be consistent must end with the cremation of the cadaver.

Another point is the use of hydrogen peroxid. It seemed to the speaker that the author's theory is very well founded, and that by virtue of the anaerobic character of the tetanus bacillus it would fall an easy victim of the nascent oxygen of hydrogen peroxid.

Another valuable suggestion made by the essayist is that referring to the taking of a culture from the suspected wound, and also that of inoculation of mice or other susceptible animals from the discharge from the suspected wound, in order to determine whether or no the patient in whom the wound exists may develop tetanus. For we know that in the mice we see tetanus developing in from two to four days, whereas, in the human subject the period of incubation is much longer; and by such a method as this we would have access to information which might be of great value in the early institution of treatment with antitoxin serum. Certainly, such a thing would not be universally practised, but cases might arise in which it would be extremely important to affirm or exclude the diagnosis of tetanus, for example, in some extremely particular person, or, indeed, in one's own person. If one should receive a wound in which earth were introduced, he would be extremely anxious to know whether it were going to develop tetanus, and he should like to know before the occurrence of the ominous muscular spasms; and by the method which Dr. Goodrich has suggested this information may be secured.

An important thing in our knowledge concerning tetanus, particularly with regard to the treatment of tetanus, is the fact that when the disease once has started, when in the beginning the symptoms are violent in character, when the signs of virulent infection are present, no treatment seems to be of much value, however radical it may be. And this seems to apply not only to the treatment with antispasmodics, but to the treatment with antitoxin as well. And at the end of a long series of experiments by Behring and Tizzoni a few years ago, the idea seems to have prevailed that the tetanus antitoxin as it was understood at that time, was of little or no use after the disease had fairly begun, but that it

would prevent the disease if the injections could be instituted early enough. It, therefore, becomes a matter of importance to be able to anticipate the symptoms.

The idea of neurectomy in the treatment of tetanus seemed to the speaker, from a theoretical standpoint, to be entirely unscientific. Neurectomy causes a paralysis of certain muscles and sensory areas, or the disturbance of certain trophic functions.

Tetanus is a disease which is due to the introduction into the system of a toxin, and one of the symptoms is the action of this toxin in a violent form upon the muscles; to do an operation which paralyses these muscles and prevents in a measure the manifestation of the symptoms must not be regarded as rational therapeutics. Experiments were made some years ago, demonstrating that the toxin of tetanus acted on the spinal nerve-centers, that this action was not upon the peripheral nerves, nor upon the muscles themselves, nor upon the brain, but upon the centers in the cord. And shortly after the publication of these views it was the speaker's fortune to see a case of tetanus following a compound fracture of the leg; and in this particular case the first symptom was not the sign of central irritation, nor a sign of irritation of the cord, but was a local disturbance. The muscles about the fracture were the first to show spasmodic contractions; and later spasms of central origin developed. We have seen enough of the action of tetanus toxin to see that its action is both central and peripheral.

Concerning the growth of the tetanus bacilli in the body, some years ago the speaker made a large number of sections of the organs of mice which had been inoculated with tetanus, and also sections of wound regions, and of the human spinal cord in cases of tetanus, and in none of these sections was he able to find any trace of the tetanus bacilli.

These things, though they throw light upon our knowledge of tetanus, are in a measure confusing; and it seems that not yet have we reached an understanding of the disease sufficient to give us a key to a satisfactory treatment.

Dr. C. H. Goodrich said that the same question arose in his mind that arose in Dr. Bristow's, but that he was eased when he read Rose's account of how he believed intestinal infection by tetanus was possible, and he elaborated his idea in recommending abstaining from eating fruits and other produce from the garden that were not properly cleansed. The authority for the statement as to amputation is also Rose, and is also the result of a great

many experiments. The essayist thought that amputation is not advisable, but it is defended most vehemently by Rose and some of the greatest authorities.

With regard to antitoxin, Dr. Wilson had told him that Roux had recently said that while it was not yet as successful as the diphtheria antitoxin, he believed in its future, but thought we must get a more concentrated article. Disinfection of the discharges has never been recommended by physicians, but is offered as the result of experience in cases in surgical wards, where persons have been put in beds that have been occupied by cases of tetanus (having had a surgical operation) and then developed tetanus within a few days.

There was one point not in the paper which he wished to present. It has been observed in about nine cases that patients have died with all the symptoms of collapse within an hour after the injection of the antitoxin, when before that they were doing fairly well; perhaps an example of the sudden death that Dr. Bristow mentioned. Dr. McCartney of Edinburgh had three cases occurring that way within a year, and he says very forcibly that he believes the deaths were due to the use of antitoxin.

The success of antitoxin is not perfect; at the same time, when we remember how many cases have undoubtedly occurred in the last ten years treated by other methods that have not been reported, and also remember that most if not all cases treated by antitoxin have been reported; or, if we could take the real percentage of cures by sedative and antispasmodic drugs and compare them with the cures by antitoxin, probably the proportion would be very different. Some cases are favorable to the sedative and antispasmodic drugs, as in particular the cases in which the period of incubation is long. But of necessity there are a great many cases in which the incubation stages are unknown.

THE VALUE OF THE PHYSICIAN TO THE PUBLIC.

BY J. L. KORTRIGHT, M.D.

Read before the Medical Society of the County of Kings.

In times when all conditions are favorable to public health, when patients are absent from the city, or when we are separated from our work, we are apt to consider ourselves of little worth to the public. In the same way the public, when they do not need us, hold us in light esteem, and are apt to belittle the value of our services, and to consider our charges exorbitant. It is, therefore, well to bring before ourselves for our encouragement, and before the public for its instruction, the economic value of the medical profession. This is a commercial age, and unless person, procedure, product, or even profession can show its value to the commonwealth in dollars and cents, it receives scant consideration and scantier support. The facts of the existence of the medical profession, and especially of its vigorous condition, are proofs presumptive of its right to exist. An attempt has been made to find approximately how much in money an ordinary physician saves to the commonwealth every year. A very modest physician of this city has said recently that he never consciously saved a human life. I am sure that very few of us will subscribe to his deprecatory statement, and that we can all, if not often, at least sometimes recall occasions at which our services have been instrumental in saving life, either by sustaining nature through a self-limited disease process or by averting danger consequent upon accident or disease. We do not hold ourselves responsible for the existence of disease. Our duty is to prevent its occurrence when we can and to cure it when it exists.

In former times the value of a human life was set at $5000, *i. e.*, this amount was the maximum to be recovered in case of death by accident. This sum, at the legal rate of interest then existing, seven per cent., produced $350 per annum, an amount, you observe, approximately equivalent to $1 per day. At the present rate of interest, five per cent., $1 per day capitalized equals $7000. The new State constitution has taken away the limit of value to life destroyed by accident, and any amount may

be recovered by suit. We are fair in assuming that $7000 is the average commercial value of a human life. Accident-insurance companies consider death, loss of the sight of both eyes, loss of both feet, loss of both hands, and loss of one hand and foot of equal value; that is, they pay the full amount of the policy for any of these injuries. We are justified in assuming that any of these disabilities are worth $7000 to the community. In the same manner, accident-insurance companies pay one-half the face of the policy for loss of right hand, loss of either leg at or above knee, or any other permanent condition totally disabling a person from the pursuit of his ordinary avocation. Also one-fifth of the face of the policy is paid for the loss of the left hand or of either foot, and one-seventh of policy for loss of one eye. These various disabilities then may be assumed to represent to the community $3500, $1400, and $1000 respectively. Certain injuries are followed by total disability when left to themselves. For example, many fractures about joints, when untreated, are followed by complete anchylosis, either from displaced fragments, exuberant callus, or accompanying arthritis. Such a limb causes sometimes as great a disability as if it were absent. If we may judge from the amounts claimed in damage suits for malpractice, such a condition is worth many thousands of dollars to the community. It is only fair to consider on this basis that the successful treatment of such a fracture with complete restoration of function to the limb is worth to the public from $1000 to $3500.

Tumors, even when benign, cause frequently complete disability by their presence, and eventually end life. Successful removal is followed by the patient's complete restoration. Every such treatment is worth $7000 to the public. It is unnecessary to multiply examples of this nature. Enough has been said to show how much greater than our fee is the saving to the community.

We, furthermore, save to the public by hastening recovery. How long, for example, would it be before an unreduced shoulder-joint would become painless enough to permit use. In such a case, by reduction, we not only save a possible $3500, but in addition $1 per diem for the period of disability. So, also, in tubercular disease of the hip, a well-fitting brace not only increases greatly the chance for recovery, but also transforms the patient from a helpless invalid to an active member of society, so that instead of a loss of $7000 there is in addition a gain of the earning capacity during the course of the treatment. Many other

similar illustrations might be adduced, but those given exhibit the principle. The fact that so many of these services are rendered gratuitously in hospitals and dispensaries in no way diminishes their value.

I have gone over the records of a single practice for a year, and tried to figure along this line the value of the service. No claim is made that this practice is larger or more successful than the average, and the physician is conscientiously and continually striving to overcome his shortcomings and to improve in knowledge and skill. It has been found impossible to estimate the amount saved by any shortening of disease from treatment. The following cases, however, would have died of injury and disease had no treatment been instituted. In all of them Nature would have been unable to effect a cure unaided: A child, aged 8 years, with empyema, and a man of 45 with scald of mouth, pharynx, and larynx, necessitating tracheotomy; a woman of 35 with double pneumonia, with pulse 140 and respiration of 56; a man of 60 with pneumonia following endocarditis; a man of 70 with acute bronchitis complicating emphysema; a child of 18 months with pneumonia and diarrhea, given up by two physicians; 4 children with diphtheria, 1 requiring intubation, 2 having severe post-diphtheritic paralysis; a woman with contracted pelvis who had given birth to dead children, delivered by version, both mother and child saved; a woman, 43, with powerless labor, large child, postpartum hemorrhage and nephritis, both saved; a primipara with contracted pelvis, both saved; a woman with a dermoid ovarian cyst with twisted pedicle and acting as an obstacle to delivery, both mother and child saved; a woman, 39, with powerless labor, large child and pleurisy, both saved; a woman with face presentation mentoposterior, both saved. In addition, 5 children were saved from suffocation in prolonged labor by use of forceps. These are in addition to other forceps deliveries. Twenty-seven lives were undoubtedly saved by treatment. The following cases were saved from total disability: A man with cellulitis of left hand, which competent physicians considered as requiring amputation; a man with fracture of the femur; a man with dislocation of the shoulder-joint. Turning these cases into figures, the total amounts to $197,400 saved to the commonwealth. It is hardly necessary to add that the income derived from that practice did not approach even the tithe of that sum. The average length of professional life may be set down as twenty years. With this calculation it

would appear that the pecuniary value of a physician to the public is between three and four millions of dollars.

Thus far the argument has been concrete. Coming now to more general consideration, we find that in preventing epidemic diseases the services of the profession have been incalculable.

The loss to the city of New York, for example, from an epidemic of cholera would reach into the hundreds of millions. Yet cholera was stamped out of the city recently by the fidelity of medical men—after that the bacterial diagnosis had been made gratuitously by the medical men. The present epidemic of yellow fever is estimated to have cost the city of New Orleans alone not less than $29,000,000. In preventing disease, physicians have always been more active than the laity. One has said that the profession stands in the disinterested and incongruous position of trying to limit its own income by preventing disease. The statement is not altogether true. It is not in epidemic times that our profession is at its best pecuniarily. Enforced poverty, scattered families, unsettled conditions attendant upon epidemics are not the best times for earning large fees, and especially for collecting them. On the contrary, times of peace and prosperity are best for us. Our interest is the same as that of the public. Mild diseases, "the small fevers thankfully received" of Dr. Holmes, are our most profitable sources of income. The more that we can prevent serious illness and prolong life, the better it is for us in a pecuniary way. The public are beginning to learn this fact, and look to us more and more to preserve them from sickness. I believe that the family physician of the future will be one who in the receipt of a yearly stipend concerns himself especially with the physiology and hygiene of his patients, and prides himself in keeping them in health and vigor.

Thus in a very sordid and mercenary way I have endeavored to sketch the value of a physician. But let us ever remember that our vocation is from above and not of the earth, earthy. In the name of humanity, and because man is made in the image of his Maker, we are called to heal sickness and injury, and to alleviate pain and distress. Because we love our fellowmen we serve them. In cheerful cynicism, you may be inclined to doubt the statement. But let me ask: On what other ground can you explain the fact that physicians are such careless business men, that they are such poor collectors; that they lay up so little for their families? Why else do physicians give so much of their time, strength, and skill to charitable institutions? I repeat, we

serve our fellows because we love them. Nevertheless, judged by the standards of economic science, our services have a value to the community, and our profession is worthy of a place in the commonwealth.

Every individual is entitled to painless death from physiological if not chronological old age. Until we have secured this euthanasia to each member of the community our task is not completed. By preventive medicine, by successful therapeutics, by wise advice we are to obtain victory over disease, and we are not performing our full duty till that victory is gained. To show how much remains for us to do, and how far we come short of our full obligation, I add the list of deaths occurring in the practice used as an illustration : A woman of 73 of Bright's disease, a woman of 63 of a cerebral tumor, two women of diabetes, a man of 50 with angina pectoris, an infant of 2 months of atelectasis pulmonum, an infant of 5 months of meningitis, an anencephalous monster aged 6 hours, and 7 persons of tuberculosis, all of them, except one, in the prime of life. The illustration shows our task. We must address ourselves to the prevention and cure of the "great white plague." By its frequence, its suffering, its fatality, it demands our serious attention and our most painstaking effort. We have learned how to take care of the streptococcus. We must now learn how to manage the tubercle bacillus. In no other way can we do more to relieve prolonged suffering, to cure loathsome disease, and to save valuable lives.

MEDICAL SOCIETY OF THE CITY OF NEW YORK.

A society with the above title has been formed, which is to be composed of the executive officers of the several county societies included within the new city. A. M. Jacobus, M. D., has been elected president, and William Browning, M. D., secretary. Among the objects of the Society will be the correction of the dispensary abuse, the protection of professional interests in all the boroughs, and a cooperation with the authorities in matters pertaining to the public health.

The mere existence of such an organization will tend to keep the profession in touch with municipal and State affairs.

A CASE OF PERIRENAL LIPOMA: EXTIRPATION OF THE TUMOR, WITH INCIDENTAL NEPHRECTOMY AND CHOLECYSTECTOMY.

BY GEORGE RYERSON FOWLER, M.D.,
Professor of Surgery in the New York Polyclinic; Surgeon to the Methodist Episcopal Hospital; Surgeon-in-Chief to the Brooklyn Hospital.

Read before the Brooklyn Surgical Society, November 4, 1897.

M. G., aged forty-three, married, and the mother of four children, was admitted to the Methodist Episcopal Hospital on October 21, 1897, with the following history:

One and a half years ago the patient first noticed a growth in the abdomen. She continued about her household duties until a short time before admission, but was compelled to relinquish these for the reason that a long continuance in the upright position brought on attacks of syncope. Six years ago a tumor made its appearance in the left breast. This was treated four years ago by a so-called "cancer specialist," by caustic pastes and plasters. She has lost markedly in flesh and strength since that time.

Condition upon Admission.—The patient is a spare woman of medium height. There is no well-marked cachexia, although the skin surface presents an anemic and somewhat sallow appearance. The abdomen is apparently filled with a large tumor, extending from the ensiform cartilage to the pelvic brim. The growth presents its most prominent portion at the umbilicus. The respiratory movements are communicated to the growth, and the latter is projected forcibly downward and forward during acts of coughing. Upon palpation the tumor is found to be oval, smooth, of a semi-solid consistence, and rather freely movable. The percussion is relatively dull over the area of the tumor: obscure normal intestinal resonance is found laterally. The left breast is the seat of a hard mass, which is attached to an extensive cicatricial area in the overlying skin.

Operation, October 23, 1897.—An incision was made in the median line, extending from the symphysis pubis to within an inch and a half of the ensiform cartilage. Upon incising the parietal peritoneum the tumor was found to be invested with peritoneum, which was spread out in a thin layer over its ante-

rior, inferior, and lateral surfaces. The descending colon had been crowded forward and toward the median line, a portion of the tumor occupying the normal site of this portion of the large intestine.

The serous investment, which proved to be the posterior layer of the peritoneum, was incised and stripped to either side, and the tumor exposed. Upon isolating and lifting the tumor the left kidney was found lying posterior to the growth, and forced below the level of the umbilicus. In attempting to separate the tumor from the kidney the fibrous capsule of the latter was found to be intimately adherent to the growth, and a portion of it and the cortical substance came away with the latter. The remaining attachments of the tumor were slight, and involved only the connective and fatty tissues of the renal region. These were rapidly ligated and severed, and the tumor lifted away.

The bleeding from the cortical substance proved to be intractable, and it was finally found necessary to perform nephrectomy to save the patient further loss of blood, having first demonstrated the existence of a right kidney. A rent in the attenuated mesocolon was repaired with a running catgut suture. The posterior peritoneal layer was replaced, but owing to the extreme thinness of this structure it was found impracticable to suture it. Its overstretched condition, however, afforded opportunity for replacing it in such a manner as to lap one of its incised edges well over the other, thus compensating for the absence of sutures. A gauze drain was led from the space that had been originally occupied by the kidney.

While clearing the abdominal cavity of gauze compresses employed to protect the intestines during the manipulation, an egg-sized, hard mass, was discovered at the site of the gall-bladder. This was identified as the latter organ distended with gall-stones. Its walls were thickened, save in two or three places, where impending perforation marked the site of an ulcerative process taking place from within from pressure of its contained calculi. The cystic duct was ligated and the gall-bladder removed. The presenting mucous lining of the stump was destroyed by the thermocautery.

In closing the abdominal cavity the portion of the descending colon at the site of the rent in the mesocolon was brought to the median line beneath the line of incision, and a strip of gauze led from this to the lower angle of the wound, in order to provide

against fecal infiltration in the event of a possible necrosis of the bowel wall from interference with its blood-supply.

The patient suffered severely from shock during the operation but soon rallied. The remaining kidney promptly took on the functions of both organs. A decided rise of temperature in the first twenty-four hours marked the absorption of the fibrin ferment from the larger denuded surface. This aseptic fever soon subsided. The drains were removed on the fifth day. The patient is now safely convalescent.

The growth herewith presented weighed, upon removal, twenty-eight pounds. It belongs to the rarely observed class of perirenal or retroperitoneal lipomas described by Professor Adami of Montreal, Canada.* Its gross appearances present lipomatous masses with areas of what appears to be a mucoid degeneration, with here and there a structure resembling sarcoma.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society's building, 356 Bridge street, Brooklyn, on Tuesday evening, November 16, 1897, at 8.30 o'clock.

The President, Dr. George McNaughton, in the Chair.

There were about seventy-five members present.

The minutes of the previous meeting were read and approved.

REPORT OF COUNCIL.

The Council reported favorably upon the following applicants:

Dr. H. C. Anderson, L. I. C. H., '96.
Dr. Otto G. Frischbier, L. I. C. H., '97.
Dr. Albert H. Heppner, L. I. C. H., '97.
Dr. Bernard Stern, L. I. C. H., '97.
Dr. Clarendon A. Foster, Harvard, '89.
Dr. Edward A. Hoffman, Balto., P. & S., '96.
Dr. Tenney H. Wheatley, Univ. Vermont, '96.
Dr. George F. Little, P. & S., N. Y., '95.
Dr. Frank J. S. Fitzgerald, L. I. C. H., '97.

* *Montreal Medical Journal*, January and February, 1897.

ELECTION OF MEMBERS.

The following, having been regularly proposed and favorably acted upon by the Council, were declared by the President elected to membership:

Dr. Lewis N. Foote.
Dr. Henry W. Nichols.
Dr. Henry R. Tuthill.
Dr. Lewis H. Fleck.
Dr. Jos. M. Doyle.
Dr. Burt D. Harrington.
Dr. Robert M. Elliott.
Dr. Isaac McM. Holly.

APPLICATIONS FOR MEMBERSHIP.

Dr. Herman Tapley Peck, L. I. C. H., '96; 124 Van Buren street. Proposed by Drs. McNaughton and Myerle.

Dr. L. M. Maus, Fort Hamilton (U. S. A.); Univ. Maryland, '97. Proposed by Drs. E. H. Wilson and D. Myerle.

Dr. Augustus Hussey, Brooklyn Hospital; P. & S., N. Y., '96.

Dr. John Joseph Kindred, 1038 Bedford avenue; Univ. Edinburgh, Scot., '89.

Dr. George L. Kessler, 588 Bedford avenue; N. Y. University, '97. Proposed by the Membership Committee.

Dr. John Parker McQuillan, 224 Fifty-third street; L. I. C. H., '95. Proposed by Drs. A. S. Ambler and J. T. Duryea.

Dr. Florence Greenman Emerson, 140 Wilson street, Wom. Med. Coll., N. Y. Inf.

Dr. Laurie M. Long Riegelman, 172 South Third street, Wom. Med. Coll., Balto. Proposed by Drs. J. W. Fleming and D. Myerle.

SCIENTIFIC BUSINESS.

"Yeast Fermentation in the Stomach." By Dr. R. L. Graham. Discussion by Drs. E. H. Bartley, J. Fuhs, R. G. Eccles.

"Treatment of Typhoid Fever." By Dr. James McManus. Discussion by Drs. J. A. McCorkle, H. A. Fairbairn, G. R. Butler, C. F. Barber, A. T. Bristow.

There being no further business, adjourned at 11.15 P.M.

DAVID MYERLE, M.D.,
Secretary.

TRANSACTIONS OF THE BROOKLYN DERMATOLOGICAL AND GENITO-URINARY SOCIETY.

A case of pustular ulcerative syphilis, presented by Dr. Morton.

Male, aged forty-two, had the primary lesion in the early part of May, 1896. He presented himself for treatment June 9, 1896. The scalp, face, and trunk were the sites of pustular ulcerative syphiloderms; there were a few mucous patches and ulcers on the pharynx; no remains of the chancre could be observed. Up to this time (June 9th) he had received no treatment. The doctor started him on a course of injections, using the salicylate of mercury. On the 22d of June he began to show marked improvement; on the 29th he was still better; he received at this time five injections at regular intervals. Early in July he was attacked with ulcerative keratitis, injections were continued, and by August 13th he was greatly improved. The doctor presented this case, first, because severe pustular secondary symptoms are rare; secondly, to demonstrate the rapid improvement of a severe case under a treatment of injections of mercury.

Gumma of the tongue, presented by Dr. Morton.

J., aged twenty-six, United States. Had a chancre in May, 1896. Case first seen in June, 1897; the syphilis followed the usual course. In May, 1897, he entered Kings County Hospital for treatment. In the center of the tongue was a small tumor which first made its appearance in February, 1897: the center of this tumor broke down and became necrotic and ulcerated. The treatment at the time of presentation was iodid of potash 30 grains, three times a day. This case was interesting on account of the infrequency of gumma infecting the tongue.

HEMORRHAGIC VARICELLA COMPLICATED WITH WHOOPING-COUGH.

Dr. Jewett related the history of the case of a child, who, during the course of pertussis, contracted chicken-pox. Each lesion rapidly became hemorrhagic. The question was whether the cough had anything to do with the hemorrhage in the skin. Dr. Sherwell thought that it was very possible, although he was inclined to consider that the run-down condition of the child, caused by the previous disease, had more to do with the hemorrhagic condition than any thing else.

Drs. Morton and Winfield related histories of cases of keloid following secondary and tertiary syphilis.

Case of enlargement of the left leg, presented by Dr. Mosher.

J. S., sixteen years of age, United States. In August, 1896, he had an operation for appendicitis: the appendix was not ruptured, but was found to contain pus. After the operation there was a slight rise of temperature. The patient did nicely for eighteen days, then he began to complain of excruciating pains about the left hip-joint; these appeared to be of rheumatic origin, although antirheumatics gave no relief. The pain continued with more or less severity for ten days, then gradually subsided. About this time the left calf began to swell. At the end of four weeks he was able to go about the ward, complaining of slight pain.

The patient was dismissed from the hospital. The doctor did not see him again until January 2, 1897. The patient expressed himself as never having felt so well, although the left leg is 1½ inches larger than the right. He never has any pain nor does he suffer any from the enlargement.

Dr. Sherwell thought that there had been a thrombosis of the leg. Dr. Morton was inclined to believe that there had been a lymphangitis, and also a blocking of the lymphatics.

A recurrent case of pityriasis rosea. The patient was a woman that Dr. Morton had presented before the Brooklyn Dermatological Society three years ago. She was then suffering from pityriasis rosea which had been cured by tonic treatment, and had been free ever since until the month before Dr. Morton was consulted. The eruption was confined to the chest and thighs.

Dr. Sherwell said that it was a typical location, and expressed himself as being exceedingly interested in its course.

Two cases for diagnosis, presented by Dr. Winfield.

The patients were mother and daughter. A month before consulting the doctor a small boy, the youngest child of the family, was attacked with an eruption situated chiefly about the neck and face. From the history which the mother gave it resembled an urticarial rash. A few days later two other members of the family were attacked in the same manner with the same disease. A week later the mother and daughter (the patients presented) began to be troubled with the same phenomenon.

There are, apparently, no subjective symptoms except itching. Slight elevation of temperature early in the attack. Tongue clean. The bowels regular. The rash was chiefly confined to the face, neck, arms, and thighs; it is papulo-vesicular in character, in

some places there are distinct urticarial wheals. In one patient (the daughter) there is considerable swelling of one side of the face, and her left ear is covered with an eczematous-like eruption. There is no history of contact with any poisonous substance, such as rhus, arsenic, or arsenically dyed paper or fabric.

In discussion Dr. Sherwell said that he firmly believed that these were cases of dermatitis from some exceedingly irritating poison, and the other members expressed themselves likewise. Dr. Winfield said that he had also considered them to be cases of toxic dermatitis, but had never seen anything like them before, and all efforts to find the toxic agent had failed. He regretted exceedingly that he was unable to procure good photographs of the cases, for they, undoubtedly, would have become a valuable addition to the study of cutaneous eruptions from external irritants.

A case of secondary syphilis and incontinence of urine, presented by Dr. Winfield.

The patient was a man thirty years old. Six years before presenting himself for treatment to the doctor he had been advised to be circumcised, which operation was performed by a physician, who, having an exploring mind, introduced a sound into the urethra. The sound failed to enter the bladder, but bore for itself a new canal. From that time to the present the patient has been a sufferer from incontinence of urine, being obliged to wear constantly a rubber urinal with all the attendant discomforts. At the present time the patient is covered with an eruption resembling in some places a frank psoriasis.

There is no trace of the primary lesion, only slight enlargement of the glands, although the eruption in the palms of the hands and soles of the feet is typically syphilitic in character. The patient's mother has been afflicted with psoriasis for many years. At first the doctor thought that the eruption was a simple psoriasis, but on investigation, and from the appearance of the hands, and the amelioration of the symptoms under the use of antispecifics, he was forced to the belief that the skin lesion was a secondary syphilis.

Dr. Morton said that he had seen a similar case of urinary difficulty brought about by almost the same maltreatment. The only cure was to perform an external urethrotomy which would drain the bladder and give the penis opportunity to heal.

Regarding the eruption, he did not think there was the slightest doubt but that it was a case of syphilis.

Dr. Sherwell said that it was another case illustrating the symbiosis of disease.

A case of gouty eczema, presented by Dr. Morton.

The patient, a male, came to the Doctor suffering from an eruption of the lower extremities. Some of the circumstances were so peculiar, that at first a positive diagnosis was difficult to make. Finally, the doctor arrived at the conclusion that this was a case of eczema in a gouty subject.

The treatment had been antirheumatics, restrictive diet, and external applications of Unna's zinc gelatine paste.

Dr. Morton also presented a case of lichen planus in which he gave arsenic for some length of time, and the patient had developed extensive keratosis of the plantar and palmar surfaces.

CHARLES DWIGHT NAPIER, M.D.,
Secretary.

J. M. WINFIELD, M.D.,
President.

THE BROOKLYN PATHOLOGICAL SOCIETY.
THE 389TH REGULAR MEETING.

October 14, 1897.

The President, James P. Warbasse, M.D., in the Chair.

The program of the evening was under the charge of Section V.:—Dr. Jacob Fuhs, Chairman, and Drs. Bartley, Brundage, Chase, Eltinge, Hoople, Kennedy, Laing, Meyer, Miller, Pettit, Richardson, Sheppard, Stub, Warbasse, and Campbell.

Forty-two members were present.

SCIENTIFIC BUSINESS.

The opening address was read by Dr. Edgar Eltinge upon the subject of Pathogena, the necessity of an intimate union of Pathology and Physiology was dwelt upon, and the hope expressed that in the future, even more than in the past, the scientific observation of the causation and pathologic changes of disease may lead to improved methods of treatment.

Dr. J. E. Sheppard presented a case of

CHOLESTEATOMA OF THE MIDDLE EAR WITH SPECIMEN AND PATIENT.

Dr. Sheppard: Mr. President, ladies and gentlemen: This patient, whom I will bring in in a few moments, is thirty-five years of age. The history when I saw him first on the 8th of last March was as follows: The right ear commenced to discharge twenty

or more years ago, this discharge still continuing. About fifteen years ago a large mastoid abscess developed, for which three or four incisions were made, one over the mastoid, one below the mastoid, and one or two posteriorly below the occiput; but so far as can be found out no thorough mastoid operation was performed. One of these openings, the posterior, was more than fifteen months in healing. Eight years ago he had another swelling over the temporal and mastoid region, with severe pain, which laid him up for three weeks, but which seems to have subsided without operation. Present attack came on two and a half weeks before I saw him on March 8, 1897, when, after being chilled, the right side of his face became paralyzed, followed the next day by pain, and one day later by swelling over the mastoid. This swelling increased, attended by violent pain until the day before I saw him, when there was a copious discharge of pus through a sinus opening about two inches below the mastoid apex, the pain being much relieved; ten days previously he had at intervals three chills; has had no vomiting. Condition when first seen March 8, 1897: Complete right facial paralysis; moderate pain in temporal region; mastoid tenderness slight, and only elicited by firm pressure over the mastoid apex; through the sinus opening in the neck a probe could be passed 2 1-4 inches upward where in the region of the mastoid apex bare bone could be felt; moderate edema over mastoid, with redness of surface; temperature 98.4° F. Examination showed pus in the external auditory canal, no trace of any tympanic membrane, nor of the ossicles; not much granulation tissue in the tympanic cavity; on account of partial destruction of the posterior canal wall, a considerable view of the mastoid antrum could be obtained. He was referred to the Brooklyn Eye and Ear Hospital, where later in the day at a consultation of the Board of Surgeons, the unanimous opinion was expressed that it would be wise to slit up the sinus, cut down on the mastoid, and then be governed by what was found. This was accordingly done the following day, March 9th; the sinus slit up to the mastoid apex, and the usual incision made preliminary to opening the mastoid; the periosteum was found greatly thickened and very adherent. On pushing this forward towards the canal, a large perforation of the anterior face of the mastoid was felt and inside of this a mass feeling more like granulation tissue than anything else. An attempt was made with the chisel to loosen the ordinary button from the outer cortex, when on removing it the whole mastoid apex came with it, laying bare the

digastric groove, and in it the digastric muscle. Above this was an unusually large cholesteatomatous mass, which was removed, and the walls thoroughly curetted, including the antrum and tympanic cavity. Over an area from one-third to one-half inch in diameter the bony wall separating the mastoid and cranial cavities had been absorbed, infection having been prevented by a thick protecting membrane. An idea can be conveyed of the size of the cavity by saying that to fill it took four strips of gauze a yard long by 1-2 inch wide. By May 21st, the opening having become inconveniently small for the necessary manipulations, the patient was again anesthetized, more of the outer bony cortex was removed, and two flaps of skin, one, attached above the opening, from the skin posterior to it was turned inward and forward, the second, attached below, from the skin in front was turned inward. A carious malleus was removed at the same time. A considerable part of the flaps united, and from them the present solid epithelial covering grew. On June 8th the stapes, the head of which was carious, was removed under cocain anesthesia. Through the large opening behind the auricle can be seen the cavity of the mastoid, the mastoid antrum, the tympanic attic, the old opening through the posterior canal wall, and a portion of the tympanic cavity, the rest of which is plainly visible by inspection through the canal, and the remaining large perforation of the tympanic membrane.

Result: cured.

The specimen shows simply the large epithelial masses, and to a certain extent their arrangement in concentric layers, like the formation of an onion.

[Patient presented.]

I will ask the patient to pass around among you. The cavity is simply protected by a little piece of cotton and if you will throw the light in you will be able to see the structures and the cavities and all I speak of.

Now, the question may arise in the minds of some, as the patient passes around, why it was necessary to leave such a large opening posteriorly to the auricle. The answer to that question is that the cavity when it was originally opened was found to be so large that it would be utterly impossible to keep it open for inspection, or to inspect the whole of it through any opening that might be made in the posterior canal wall, and experience has proved very clearly that in these cholesteatoma cases unless they are kept open for inspection and the cavity apex covered entirely

with good, stout epithelium, they will recur and require recurring operations from time to time. As to the previous treatment of this case before I saw him, to my mind there is no question at all but that this whole subsequent trouble might have been avoided by a thorough mastoid operation at the time that he had his first mastoid trouble fifteen years ago. Had at that time a complete and genuine mastoid operation been performed and all carious bone removed, and if the ossicles had been carious and had also been removed at the same time, the case would undoubtedly have healed and saved him all this trouble; and as you will readily see from the history he had a pretty narrow escape when we consider that a very considerable portion of the inner mastoid cortex had been absorbed by pressure.

Now, perhaps to this Society one of the most interesting features of this case is the pathology of cholesteatoma. I do not know that I, as an aurist, would be able to throw very much light on the question of this pathology, but I should like to learn from the pathologists who may be present. I made a few notes as to some of the theories that are held.

In "Foster's Dictionary" the definition of cholesteatoma is this: "A form of cystic tumor having the same sort of sac as an atheroma, containing a white, shining, semisolid fatty material resembling stearin or spermaceti; often lamellated, sometimes also small hairs and crystals of cholesterin; occurring oftenest in the pia mater of the brain, and sometimes in the subcutaneous areolar tissue. Under the microscope the contents show very delicate, flat, round or polygonal, generally non-nuclear cells, casually in contact with each other." Now to my mind that does not refer to cholesteatoma as it is known to the aurist. I think that can refer simply to the so-called cholesteatoma vera, which is oftenest found in connection with the pia mater.

As to cholesteatoma from the aurist's standpoint:

Habermann in his "Pathological Anatomy of the External Auditory Canal," speaks of Keraton's desquamative inflammation and cholesteatoma as one and the same process, due to long continued inflammation of the lining of the external canal (the same as results from chronic inflammation of middle-ear lining) and consists of an active proliferation of the Malpighian layer of the epidermal lining of the external canal and of an active throwing off of the superficial lamellæ of epidermis, which collect into onion-like layered masses, which consist of epidermis layers glistening like mother-of-pearl and containing cholesterin crystals.

Habermann says the same may happen from chronic inflammation of skin layer of the membrana tympani.

Wendt speaks of an endothelial cholesteatoma of the membrana tympani, which is said to have arisen from the endothelial structures of the sheaths surrounding the fibers of the membrana propria of the membrana tympani.

Habermann, on cholesteatoma formation in the middle ear, says: "These masses consist of horn-like cells arranged in concentric onion-like layers, the cells also in part fattily degenerated, among which are scattered cholesterin crystals, and micro-organisms. As an outer layer is found a more or less developed rete Malpighii, as in epidermis, which sometimes sends cones into the underlying connective-tissue. Upon the rete Malpighii is a thin connective-tissue layer and then the bone, or if free in the tympanic cavity, the cylinder epithelium of the tympanic cavity."

As to the origin of cholesteatoma, opinion is still divided. Formerly, Virchow and others looked upon them as true tumors —lately Virchow has said they approach near to atheroma and dermoids, but cannot be classed with either one, and that he is at present unable to explain their origin. Aural pathologists now largely hold to the view that it consists simply of a migration into the tympanic cavity of the epidermis of the external canal or membrana tympani, of which an active proliferation is caused by the adjacent chronic middle-ear inflammation and that it grows inward through the perforation over the ulcerated mucous membrane. The inflamation continuing keeps up the proliferation, desquamation following, and hence these concentric masses. Against this wandering inward or migration theory is the absence of its analogue in other parts of the body.

DISCUSSION.

Dr. H. A. Alderton: The phases through which the aurists have passed in trying to account for this condition have been briefly stated by Dr. Sheppard. First Virchow's theory that they were in the nature of true epithelioma of the brain substance; after that Van Trusch came to the conclusion that it was simply the banking together of desquamated epithelium and pus which by pressure gradually affected the mucous lining of the cells and caused a change of the epithelium to the pavement variety. After this Wendt came along and reached the conclusion that it was exactly similar to the desquamated variety of otitis externa, in

which the superficial epithelium is thrown off because of chronic inflammation in the skin itself. Then Habermann, as the Doctor has said, thought that it was an extension inward of a process from the canal through a perforation in the membrana into the middle ear and thence inward. This latter is, I believe, held by most aurists, as Dr. Sheppard stated, but it does not seem to account to all men for the conditions found in many of the cases.

In the first place, there is there present, as we notice in this case—I had the good fortune to be present with Dr. Sheppard—a complete layer of pus between the tumor itself and the bony wall; that is, the pus surrounded the tumor. Now, I do not agree with the opinions expressed by Van Trusch or Habermann. To me it has seemed that we have to do in this case with an osteitis, that a low grade of osteitis is set up by the usual middle-ear inflammation, which in the majority of cases is sufficiently sthenic in character to produce a true abscess in the bone, and I believe in certain diatheses, such as the tuberculous or the specific, there may be set up a low grade of osteitis. There is, perhaps, in the beginning a slight development of granulation tissue by the breaking down of the walls of the cells which have a low grade of vitality because of their circulation and their thinness, etc. I believe that this low grade inflammation produces a certain amount of secretion both of pus and of epithelium; that the drainage from the mastoid cells is insufficient in character, and being so there occurs a gradual condensation of the products of inflammation, and that this exerts by its accumulation a certain amount of pressure upon the bone which is already diseased; is already affected by, as I take it, by a chronic osteitis. The combination of the two processes is reactive; that is, the accumulation of epithelium and purulent detritus exerts pressure on the already diseased bone, the products of the inflammation of the diseased bone of course adding to the quantity of pathological products in the cavity, which exerts a pressure also. Now, these two forces acting together seem to me to account for the gradual extension of the process; more and more bone is affected, more and more partitions are broken down, and gradually we have the picture that we see here to-night in this patient's case.

This, of course, is a theory which has not been advanced by anybody. How true it is, I have not had a sufficient number of cases to vouch for. I have had a number of them, one certainly as extensive as this, if not more extensive, in a child, and numerous others of lesser degree; so it seems to me I am not without

some logic in holding that this may be simply an osteitis which is modified in its character by the state of health of the patient—the diathesis of the patient, either tubercular or specific—and when we consider that this growth, in the cases I have seen and those I have seen with Dr. Sheppard, has been surrounded by pus to a greater or less extent, and that if they are operated upon they are difficult to heal. Gradual desquamation from the surfaces which are not in active inflammation continues for a long time, but I have always found in my experience that there is some little part of the bone which is undergoing an active process, and not until you get that particular portion of the bone healed will you have the desquamative process extending over the rest of the bone subside.

I think we must all congratulate Dr. Sheppard on the extremely good result in this case. It is certainly a very unusual result to get.

Dr. Lewis H. Miller presented a case of

ANGIOMA OF THE BASE OF THE TONGUE, WITH SPECIMEN AND SLIDE.

Dr. Miller: This specimen is a simple one and the history short. The diagnosis was made from microscopic examination by Dr. Van Cott. The case is that of a lady some 48 years of age, with enlargement of the papillæ at the base of the tongue apparently, and considerable swelling and edema of the glottis. When she came to my office these symptoms were quite alarming. There was also asthmatic trouble, with weakness of the heart, and at the first visit at my office I was very fearful of the alarming conditions of the edema. However, I prescribed for her and saw her a second time at my office and removed a portion—or one, as it appeared, of the larger of the papillæ at the base of the tongue. I had not seen angioma of the tongue before or since. Of course, I had considerable trouble from hemorrhage, not immediately, which surprised me rather when I knew the nature of it, but during the night—it was done in the evening—and the next day, the bleeding was quite alarming, and the tonsil on that side, on the right side, became greatly enlarged and very black. One half of the soft palate pressed the base of the tongue over to the other side, with enlargement of the tonsil and apparently an infarction. I was very much puzzled with the condition, and the moment this was removed, it being so different from the ordinary papillæ at the base of the tongue, I preserved it. fearful that it was sarcoma. Dr. Van Cott made an examina-

tion and pronounced it angioma, and I have the slide here which he prepared. The next day I had some trouble, as you may imagine, to check the hemorrhage, with the base of the tongue pressed well to the opposite side. The peculiar appearance of the tonsil and soft palate cleared up within a week or ten days after the hemorrhage was checked. The application of the caustics used in checking the hemorrhage, and the removal of one-half of the growth has greatly improved the case, yet there is still a small portion of it there, and there is still enlargement of the remaining papillæ with a peculiar "cooked-starch" appearance.

Angiomata of the base of the tongue are rarer cases than is generally considered. You are all familiar with the hypertrophy of the lingual tonsil, and with the ordinary lingual varix, and cases in which there is a combination of the lingual varix with hypertrophy are often called angiomata, when in reality they are not true angiomata. I saw a case of that description which was shown at the Academy, and the person who was very expert with the microscope, asked for this specimen to test; he pronounced this to be clearly a case of angioma, being thus entirely in accord with Dr. Van Cott.

[Slide exhibited under microscope.]

Dr. Glentworth R. Butler read a paper, entitled

NOTE ON THE MODE OF PRODUCTION AND DIAGNOSTIC MEANING OF THE CREPITANT RALE.

Dr. E. H. Bartley presented a case of

INTESTINAL OBSTRUCTION DUE TO LUMBRICOIDS; SPECIMENS.

The patient was a female child, six years old. She was taken ill on the 2nd of August, and vomited a considerable amount of greenish fluid. No pain. Citrate of magnesia was given by parents and free catharsis produced. On the 5th of August there was considerable pain in the abdomen localized at McBurney's point. Vomited a round worm. Diagnosis of appendicitis made, and confirmed by Dr. Jewett who was seen in consultation on the following day. An operation was done at once. The appendix was found moderately inflamed; it was removed, and sent to Dr. Van Cott for examination. Masses of round worms were found at the ileocecal valve completely obstructing the lumen of the gut. About three inches above the ileocecal valve a large hematoma was found that had dissected along inside the wall of the gut, and could be seen to increase in size during the operation. The in-

testine was opened, the mass of blood and the ball of worms were removed.

The patient made a good recovery from the immediate operation, but two days later thrombosis of the left anterior tibial artery developed and gangrene resulted. The knee was amputated at the knee-joint by Dr. Jarvis S. Wight. Recovery.

In almost all such cases there is intense congestion of the whole intestine above the point of obstruction. That we would very naturally expect, but it has been denied by some that obstruction due to such a cause is possible. Lichenstein doubts the possibility of this accident, and so states in "Ziemsen's Encyclopedia." There are, however, at least four cases of undoubted obstruction due to this cause.

The case was a considerable portion of the time under the care of Dr. Jewett, and I will leave him to make any remarks upon some of the details of the case. I have simply given the bare outline.

The pathology of the appendix I expect Dr. Van Cott to report upon, and also the cause of the obstruction in the artery in the left leg. In operations for appendicitis it is not an unusual thing to have a phlebitis on the left side, and, strangely enough, it nearly always appears on the left side rather than the right. That fact is perhaps more easily accounted for than occlusion of the artery. I examined the heart, and discovered no lesion in its valves. It is, of course, possible that a clot did form in the heart and plugged this artery as a result of the anesthetic, but that, as I say, is speculation. That part of the case is peculiar, and yet I have no good explanation of it.

Dr. J. M. Van Cott: The case itself, as reported by Dr. Bartley to me some time ago, is one of extraordinary interest because of its rarity.

I have here a section of the appendix of this child and I find on microscopic examination of it that there is a very large amount of small round-cell infiltration; the lymph-spaces are some of them filled with leucocytes; there is necrosis of the mucosæ; there is some atrophy of the follicles of the mucosa, and the meso-appendix is also infiltrated with small round cells; there is a little coagulation necrosis in the muscularis and submucosa.

In my opinion there has been phlegmonous inflammation of the appendix. It is certain that there must have been septic inflammation.

The limb, unfortunately, had become so disintegrated through

its burial and the fact that it had not been properly preserved, that it was impossible to make any intelligent dissection or examination of the artery.

Dr. Charles Jewett: I do not know, Mr. President, that I can add anything to the account already given of the case. It is of interest from several standpoints. In the first place, it was apparently a pure and simple appendicitis without any very marked tumor; the other tumor could be felt and when the abdomen was opened the knuckle of intestine filled with the lumbricoids was lying to the outer side of the cecum and that was what we undoubtedly felt in our examination. Two or three drams of cloudy serum came from the abdomen, but there were no adhesions.

My recollection is that the blood-clot was not so far away from the iliocecal valve—six or eight inches, perhaps. The incision, a short oblique one two inches long, for the removal of that clot was made first, and then an incision for the removal of the contents of the gut was made further up in the healthy portion of the gut. The case was one of appendicitis, as appeared from the gross findings at the time of operation and as is confirmed by the report Dr. Van Cott has just made.

The specimen was preserved by Abbey's method, distending it through the nozzle of the syringe with alcohol, and then tying it tight while distended and placing it in strong alcohol.

The causation of this thrombosis in the anterior tibial is extremely interesting. I think it is extremely unusual that we should get such an occurrence in the arterial portion of the circulation. My impression is that the trouble in the vessel was of septic origin propagated downwards, and yet that view perhaps is not tenable.

The President, Dr. James P Warbasse, presented the following cases, with specimens:

I. RETRO-UTERINE DERMOID CYST.

This specimen is from a woman twenty-nine years of age; married; no children; no miscarriages; menstrual history began at seventeen; was regular. For the last three years the flow had been growing less, and finally lasted only one day. Eleven months ago she had a sharp pain in the lower part of the abdomen on the right side, which radiated down the thigh. This lasted a couple of days; has had frequent recurrences of this pain; also, has suffered from backache and headache, feeling of weakness and bearing-down sensations about the pelvis.

The examination of this woman, who was in comparatively good health, showed a retro-uterine tumor the size of a good-sized lemon. Both the uterus and the tumor were freely moveable. I opened the abdomen in the middle line and discovered this extremely interesting condition [I will pass the specimen around; the tumor has been opened in order to discover the character of its contents, and sewed up in order to preserve the contained material]: There were no adhesions, and a loop which was formed behind the uterus by the two tubes, whose fimbriated extremities were adherent on each side of the cyst lying behind the uterus and this loop, could be lifted up like the bail of a bucket or pot, entirely free from adhesions. The fimbriated end on the left side was dissected loose from the tumor, and being mistaken in my diagnosis, assuming that I had a pus tube to deal with—for the adhesion of the tube to the cyst on the right side was so very intimate that it seemed entirely continuous, and it seemed that the ovary was adherent to the tube along its course—the tube and ovary, with the attached tumor, were removed. I discovered when it was too late that the right tube and ovary might have been saved by dissecting the cyst away. The tube and ovary, however, were somewhat disorganized, and the loss is not a serious one.

The pathologically interesting point in this particular specimen is as to the origin of the cyst. Ordinarily we see these cysts developing from the ovary or from the parovarium, growing down into the broad ligament, or at least intimately associated with the broad ligament. This particular cyst was entirely free from the broad ligament, had no intimate connection with either ovary, and was but loosely adherent to the tubes on either side.

2. CYST OF OMENTUM.

This specimen is from a woman fifty-eight years of age, who for four years had carried a femoral hernia, irreducible during the last year. This woman was operated on with the result of discovering a sac easily isolated and containing omentum closely adherent to the sac wall. It was dissected free, and was found to contain multiple cysts. Several of these cysts have been incised and the contents of all of them was uniformly clear serum. This is not an unusual case of course, but illustrates cysts of the omentum which have evidently formed after the omentum had become the contents of an hernial sac. We assume that these cysts are firstly due to venous obstruction,

causing an accumulation or exudation of serum beneath the peritoneum of the omentum, and that practically it amounts simply to a lifting up of the peritoneum of the omentum. In some places, there have evidently been adhesions uniting certain areas of the omentum. When this localized exudation occurred it was confined, and so formed cysts of that sort.

3. CYSTIC TUMOR OF THE BROAD LIGAMENT; CYSTIC OVARY.

The last specimen which I shall present is a specimen taken from a woman thirty-three years of age, who had been married twelve years, had borne one child, and had suffered no miscarriages; lately she had suffered a great deal from dysmenorrhea. For the past two years there had been some flow of blood between the periods; continuous pain over the lower part of the abdomen, worse on the right side; painful menstrual periods, flow between periods; occasional difficulty of micturition. This woman's pain was unusually intense for a case of pelvic tumor of this size. Upon opening the abdomen the broad ligament was found to be the seat of a tumor contained within the folds of the broad ligament on the right side. The broad ligament was opened and the tumor shelled out. It was cystic in character, about the size of a small fetal head. It was easily shelled out from the broad ligament, and upon incising it was found to contain inspissated pus. It had very much the appearance of a dermoid cyst in which the dermoid element was soft or fluid in character, and which had at one time undergone a suppurative process. The suppurative process was an old one and the pus had become sterile, as is the case in old abscess cavities in the pelvis. There was no bacteriological examination made. On the left side there was a cystic condition of the ovary, which ovary was removed.

All three of these patients are making uneventful recoveries.

Dr. J. Fuhs presented a specimen of

CARCINOMA OF THE PYLORUS.

Dr. Fuhs: I take the liberty of presenting a somewhat ordinary specimen of carcinoma of the stomach, showing the advanced lesions of that disease, apparently beginning at the pyloric end and gradually involving the lesser curvature, the adjacent portions of the liver and pancreas, and ascending from there backwards to the mesenteric glands. This specimen is presented because it shows very rapid development of the disease.

The patient was an old gentleman who had been well, according to his statement, up to six months before his death; he had

always enjoyed good health, except that at sixteen he had an attack of severe neuralgic pain with symptoms of disturbed digestion and pain. At the time of admission to the hospital on April 20th a distinct tumor could be made out at the pyloric end, at the opening corresponding to the pyloric end of the stomach. He rapidly emaciated and suffered the usual characteristic pains found in carcinoma, and he died four days ago. I present the specimen first of all with the intention of showing the rapidly progressing disease, and the fact that at an early stage the adjacent tissues may be so involved that an operation for removal of the pylorus, with the intention of removing the entire growth, is out of the question. I want to emphasize, of course, the necessity of early diagnosis, and, if possible, an early operation, and the fact that, in this case, as in many others, a complete removal is im possible, would point to the necessity of making a gastro-enterostomy rather than pylorectomy.

In this case an examination of the stomach contents showed the absence of hydrochloric acid in the stomach secretion.

A history of traumatism was not found in this case, though in the rest of the cases I have seen there has been either a history of traumatism or a history of severe mental strain, or mental worry—"mental traumatism," if I may be allowed to use the expression. This I mention because lately a great deal of stress has been laid on the fact that carcinoma of various organs, beside the stomach, follow traumatism; that this traumatism need not directly affect the stomach, but it may occur at a distant part and indirectly influence the stomach. If we accept this view, we have a right also to accept the view that severe worry disturbing the digestive organs might act in the way of traumatism.

The secretion of the stomach does not seem to be entirely characteristic of the disease, for it may be either excessive or diminished even in cases where the tumor can be felt, and the subsequent history shows we have to deal with malignant disease. On the other hand, we find want of secretion, and I had an opportunity to see a case where it was reasonable to suppose that this want of secretion had existed for a considerable time and perhaps antedated the occurrence of the malignant disease; nor do I think that the want of secretion has an influence in producing the malignant disease, as we see ulcer of the stomach involving the base, in spite of good secretion. It must depend upon an underlying condition of the mucous membrane of the stomach, not necessarily causing loss of secretion, which might be favor-

able to the development of malignant disease. We find, both in ulcer of the stomach with malignant disease, and in malignant disease with want of secretion, an infiltration of the mucous membrane of the stomach. In both cases we have to deal with a diseased mucous membrane; in the one case surely before we have a malignant disease, and in the other case very likely. This condition of the secretion is so much in contrast to the condition of the motor function that it strikes one in every case one examines. One will see almost complete or even absolute absence of hydrochloric acid, and at the same time a hypertrophied muscle, as shown by the increased peristalsis to overcome the resistance of the pylorus. So I believe we must think more of the condition of the mucous membrane than of the condition of the entire organ.

In this particular case we have no displacement of the pylorus. The pylorus began to adhere directly to the liver so early that there could be no downward displacement. I have no doubt that if this case had been examined early there would have been no tumor found. In other cases adhesions take place late, and the weight of the food and perhaps also the weight of the tumor bear down the pyloric end. It is very much to be wished that some mechanical genius could devise some way of pulling down this pylorus so that it can be reached—I saw only the other day a case where the gastrohepatic ligament was so long that if one could only get at the pyloric end one could easily pull it down so it would come free of the free border of the liver. So far there has been no such an attempt made, though attempts have been made to reach the pyloric end with instruments. It might not be so very difficult to displace the pyloric end if the gastrohepatic ligament is sufficiently long and there are no adhesions.

DISCUSSION.

Dr. E. H. Bartley: Was the patient a sufferer from ordinary indigestion, or any disturbance of digestion prior to that?

Dr. Fuhs: No, sir; he was in perfect health; never had any stomach disturbance at all.

Dr. H. P. de Forest: What was the ultimate cause of death; was the lesion found here sufficiently severe to cause death in itself?

Dr. Fuhs: The pylorus became absolutely occluded; he vomited all his food. He was in no condition to make gastro-enterostomy; he died of inanition.

The President: I think that here is an opening for some of the

HENRY J. CULLEN, M.D.

surgical gentlemen to add something. May I call upon Dr. Wunderlich?

Dr. Wunderlich: It appears to me that if the patient was in the hospital since April, there might have been some time when gastro-enterostomy might have been done and his suffering relieved.

Adjourned.

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HISTORICAL DEPARTMENT.

HENRY JAMES CULLEN, M.D.,

Sixteenth President of the Medical Society of the County of Kings.

The following biographical sketch of Dr. Henry J. Cullen is taken from the *Medical Register* ("Green Book"), 1875–6, pp. 196–7, with a few additional items from the records of the Historical Committee, and the letter inclosing the photograph, from which the portrait given in this number of the JOURNAL was made, by his son, Hon. Edgar M. Cullen, Justice of the Supreme Court:

"Cullen, Henry James, was born at Manor Hamilton, Sligo, Ireland, July 2, 1806. He died July 17, 1874, at Kinderhook, Columbia County, N. Y. He came to this country a boy of about fourteen years, and lived the subsequent five or six years in New York City. Thence he removed to New Orleans, where he began the study of medicine. From 1825 to 1827 he spent in Matamoras, Mexico, from which place he returned to the United States, resumed his medical studies, and graduated from Geneva Medical College, New York, in 1828. Immediately following this, he returned to Matamoras, and spent three years there. During this stay he was enabled, by the personal friendship of Bustamente, the Mexican President, to obtain the pardon of seventeen of his American countrymen who had been captured fighting for the independence of Texas, and brought to Matamoras for execution. In 1836 he visited London and Paris, in which cities he spent eighteen months, attending lectures and visiting hospitals. In 1837 he returned to the United States and settled in the city of Brooklyn, where he resided to the time of his death. In 1838 he married Eliza A. McCue, sister of Judge Alexander McCue, of the City Court of Brooklyn. They had eleven children, six of whom, with their widowed mother, survive. He soon obtained a large practice, which was pursued faithfully and successfully till 1870, when he again visited

Europe with his family, remaining abroad three years. Though absent for pleasure and healthful enjoyment, he never failed to note objects of professional interest, and to communicate them by letter to his medical society at home. He returned to Brooklyn a year before his death, but did not resume practice. He died, not from any acute disease, but by reason of a gradual failure of physical strength, due, in great measure, to his many years of severe professional work. He was for a long time an active member of the Protestant Episcopal Church."

Dr. Cullen became a licentiate of the Medical Society of the County of Kings in 1843, a member in 1844, Vice-President, 1846–7, and was elected its President in 1849, and served as one of the Censors in 1851, and in 1856–7. He was for years one of the physicians of the Brooklyn City Hospital, and at the time of his death, Consulting Physician to St. Peter's Hospital, and St. Mary's Hospital. He was a member of the Brooklyn Medico-Chirurgical Society, 1857–56, and its President in 1866.

He was one of the worthiest practitioners Brooklyn ever had. His love of practical truth, his high sense of honor, his charitableness, and, above all, his consistent Christian character, commended him to his patients and medical brethren. He was ever alive to the facts of science, and ready to aid, by word and action, those who needed assistance. As a type of his professional enthusiasm, the following incident is illustrative: The winter preceding his death, with health too much impaired for active work, he was still unwilling to lose an opportunity to observe operations of interest. The last time he was seen by some of his medical friends was on a cold night, the air filled with snow and rain, and the pavements slippery with sleet, walking a good distance in spite of his chronic enemy (asthma), to witness the transfusion of blood from the carotid of a lamb to the veins of a man enfeebled by disease. Such occasions Dr. Cullen never let slip. He was a practitioner of the old school' as represented by Hosack, Mott, and Francis, but in perfect sympathy with the progressive spirit of the profession.

To Dr. Cullen the Medical Corps of the Navy owes a debt of gratitude which, when known, will be fully appreciated. He it was who instigated the movement, in 1869, to secure for them the rank which had often been asked for and as often denied. Acting upon his resolution, the Medical Society of the County of Kings appointed a committee, with power to promote, by all lawful means, the passage by Congress of a bill according to the

Naval Medical Corps their just demands. Circulars with his name appended were addressed to medical societies far and wide. Petitions were sent to Washington, and members of Congress were appealed to personally to forward the cause which, two years later, signally triumphed. The writer of this sketch, who served with Dr. Cullen on that committee, is cognizant of his great interest in the matter, and how much of personal sacrifice he made. His well-known character gave strength to the appeals which he made to members from his own city in behalf of his brethren of the Navy.

Dr. Cullen was a man, not only of decided natural ability, but of high intellectual culture. He was a thorough Latin scholar, and spoke with ease French, Italian, and Spanish. By strict devotion to his profession, he amassed quite a fortune, and was thus able to enjoy with ease and comfort the last few years of his life.

The following very true paragraph is taken from an obituary notice of him by one who knew him well: "He had been sick for many months, and sought the country in the hope of improving his health. He was a distinguished physician, eminent for his learning and skill, admired for his classical taste and literary culture, widely known for his kind services and open-handed benevolence. The rich sought and the poor commanded his services. He was endowed with a strong intellect, a quick perception, a love of truth and honesty, and was one who himself practised the virtues we admire in others."

The only published paper of Dr. Cullen's known to the Historical Committee is: "Catalepsy—Report of a case—1864."

MISCELLANEOUS.

THE PHYSICIAN AND THE PHARMACIST.

BY ALBERT H. BRUNDAGE, M.D., PHAR.D.

Read at a meeting of the Brooklyn College of Pharmacy, and communicated by the author to the *Druggists' Circular and Chemical Gazette;* also read, by request, before the Brooklyn Medical Society.

It is passing strange that any inharmonious relationship or feeling should exist between the physician and the pharmacist.

They are naturally as identical in their interests and as closely related in their purposes as the knight and his armor-bearer, as the general and his aides. Both the physician and the pharmacist are engaged in a war upon disease and against death, and are truly "comrades in arms." In the common cause, the relief of human misery, the protection and salvation of human life, they are the community's resource, representatives, and defenders. They are thus mutually interested, bearing such responsibilities and associated in such dependencies as would seem to inseparably cement the fraternal relationship naturally existing between them.

But, unfortunately, a lack of harmony exists, and the fact is a matter of chagrin to those members of each profession who have the true interests of their profession at heart.

Unfavorable comments and scathing criticisms by members of the one profession concerning the methods of those of the other, serve but to widen the breach, instead of bridging it; to create the impression that there is no fraternal feeling; that they are enemies, instead of vocational kinsmen; that one profession is trying to prey upon the other and prosper at its expense.

This is all wrong and altogether unworthy members of such professions, and such attitude or seeming condition must have originated in certain mutual misunderstandings; in a failure to fully and properly recognize the rights, privileges, duties, responsibilities, and conditions inherent in each profession.

Members of each profession appear so jealous of their rights and so impressed with their own importance that any fancied encroachment upon the province of one by the other is considered ample ground for assuming the aggrieved defensive, if not aggressive.

Much, if not all of this inharmonious spirit might be prevented if the members of each profession would be more considerate and make more liberal and fair-minded concessions.

The physician complains about the pharmacist's counter prescribing, substituting, pushing of specialties, favoritisms, comments on the physician's therapeutics, etc.

The pharmacist is loud in his denunciation of dispensing by the physician, of the physician's new-remedy prescribing fads, of his making serious inroads into the pharmacist's business by dispensing methods, etc. He also accuses the physician of an unwarranted superciliousness.

If there could be a medico-pharmaceutical clearing house, doubtless many of these differences would be done away with, but until there is a better understanding through some such medium many of them will continue to exist.

The physician in complaining about the pharmacist's prescribing, very truly avers that as the pharmacist is not educated nor trained as a diagnostician, nor as a therapeutist, he is not capable of taking the physician's place.

The physician having expended much time, labor, and money in order to qualify himself for his profession, and recognizing the difficulties encountered in diagnosing diseased conditions and applying the proper remedies, naturally views with dissatisfaction any side methods designed to supplant him, or intercept his fee.

When the pharmacist sells some of his medicine by means of his advice for disease, he has been remunerated for his advice and has intercepted the physician's fee.

While the pharmacist should not attempt to treat disease, nor deal with any serious physical condition, the writer has always maintained that the pharmacist can very properly give advice and aid, to the public, in simple matters.

Most physicians fail to recognize the pharmacist's position in such matters. They do not seem to realize that a certain amount of advice to the public is naturally expected, and morally legitimate and proper. The public demands a certain amount of advice and council from neighbors and friends, including the pharmacist. His advice is properly sought as to a convenient cathartic, the use of sweet spirit of niter for a slight cold, or arnica for a bruise, etc.; also, as to the probable seriousness of certain symptoms, and necessity for securing medical attendance without delay; likewise advice concerning the proper disinfectant for unsanitary household conditions, etc.

Such advice by the pharmacist is surely legitimate and for the general good. He does not lose his right as an individual by being a pharmacist, and an individual would do the same from any acquired knowledge or experience. If there were no pharmacists, the public would probably in such matters depend as a rule upon the advice of less educated persons, or take their chances with these household remedies; not resort to the physician and pay a fee. As long as the pharmacist confines his advice to simple ailments or conditions, and sanitation, he can do much good, prevent much self-injury by the public, and do much toward educating the latter to have a higher regard for the services of a physician when such are required.

The pharmacist of to-day by means of the modern college of pharmacy curriculum, is also so educated and qualified as to be capable of giving most advantageous first aid to the injured, pending the arrival of a physician, thus making the latter's efforts more fruitful in good results, and often saving life.

But the pharmacist who goes outside the lines of propriety and reasonable service to the public, and, without the physician's training or skill, attempts to supplant him by making physical examinations, or treating severe or serious conditions, is guilty of a crime against the patient and the physician, and, if for a remuneration, also before the law. Such a course is sure to ultimately result in disaster.

Educating the pharmacist as a physician, as proposed some two years ago by a prominent New York pharmacist, would gravely complicate the situation and surely tend to degrade both pharmacy and medicine. The pharmacist educated as a physician would be unnecessarily educated for pharmacy, and would soon cease to be a pharmacist. His pharmacy would soon become a dispensary; true pharmacy would be more and more neglected by him and the true exponents of both medicine and of pharmacy forced to take issue against him. This is a day of specialties. Pharmacy and medicine have each of them so broadened and deepened, and become so comprehensive, as to require the unceasing energy, interest, and devotion of the practitioner of either of them, in order for him to be a true and proper representative of that profession. To attempt to ride two horses at once is invariably to court disaster, particularly if each requires one's whole attention.

Respecting the complaint regarding substitution, it is evident that substitution is a crime against the patient, the physician, and the pharmaceutical profession, of which crime he who thoughtfully

considers the matter cannot unconcernedly be guilty. Upon a strict conformity to the provisions of the prescriptions ofttimes depend the successful career of the physician, and the pharmacist, and the salvation of the patient. Honor and self-interest demand that these considerations be not ignored.

The pharmacist who recommends a patent medicine or specialty, the constituents of which are unknown to him, assumes a great risk and is likely to some day most uncomfortably see the the error in such procedure.

Medical favoritisms by pharmacists are usually unwise, and the criticizing of one physician's prescriptions or treatment in a case in the interest of a physician friend or favorite, is most reprehensible, and quite a serious matter in case of a rupture of friendship with the then only contributing physician.

If the dose is not improper or the medication manifestly injurious, it is not the pharmacist's province to direct the treatment. If he attempts to do so, the physician has very good cause for complaint. If the dose or medication is manifestly improper or even doubtful, it is his duty to communicate with the author of the prescription. Even druggists have been known to make very serious mistakes, and, consequently, cannot afford to over severely censure the physician. There should be that cordial relationship existing between physicians and pharmacists that an error by one should be promptly and zealously met by the other. The anxieties, cares, responsibilities, and annoyances in each of these professsions are sufficient to explain the occurrence of mistakes, and it is, indeed, surprising there are not more of them. The pharmacist's position enables him to serve in the capacity of a check on the accuracy and safety of the physician's prescription. Naturally, his care and consideration are, as a rule, reciprocated at every opportunity by his medical brethren, thus contributing to maintain certain bonds of friendship.

The pharmacist complains bitterly that the physician is unwarrantedly supplanting him by dispensing tablets, etc. There is reason in all things, and in this, as in the question of counter-prescribing by the pharmacist. Promiscuous dispensing by physicians is not only improper, but may even be unsafe. The ordinary physician is not trained nor skilled as a compounder of medicines. The writer has, while in the drug business, had occasion to note the lack of acquaintance, by some physicians, with the differences in physical appearances between such drugs as Dover's powder and morphine, kino and lycopodium, or re-

garding the use of excipients in making pills, the usual method of filling capsules, or methods in compounding mixtures. How safe and proper can compounding by such physcians be?

But there is a certain amount of dispensing by physicians which is not only proper, but in some respects desirable. Homeopathic physicians, as a rule, write very few prescriptions, consequently the pharmacist is very little benefited by them as a class. Pharmacists depend for prescriptions upon physicians of the other school; consequently, the success or failure of members of that school very materially affects the pharmacist. As the medicines administered by the homeopathic physician usually have a much more agreeable taste than those prescribed by his fellow of the opposite school, and, inasmuch, as at the same fee for a visit the former usually contributes the necessary medicine, and the latter does not, the public are quite frequently influenced by these considerations in selecting a physician. The lesson this would teach is that the pharmacist and his physician should unite in an effort to produce more elegant preparations, present medicines in the most agreeable and convenient forms, and at the least possible expense. In the effort to produce the most satisfactory preparations the physician must depend mainly upon the skill and education of the pharmacist. That is a part of the latter's vocation, and with proper encouragement and cooperation past experiences and observation demonstrate he is capable of brilliant results. The matter of expense in medication is very largely in the physician's hands. If he will avoid prescribing expensive drugs where cheaper ones will do as well, refrain from needless experimentation with chemical curiosities of which he uses but one dose, the rest of the "original package" encumbering the druggist's shelf and depleting his pocketbook, the public will have less reason for complaint about drug-bills, and the pharmacist be better off. An additional means, and a very important one, by which he can secure and retain the patronage of the public for himself and the pharmacist, is that of carrying with him and giving out when required some certain kinds of medicine in suitable form; such as a single dose of a cathartic, of an anodyne, or an emetic. Ofttimes it is very desirable to get an immediate effect; delay may be dangerous, yet unavoidable, particularly in the night; to disclose the nature of the remedy by sending for it by name, or hazarding its interpretation by the family from the prescription, may seriously interfere with anticipated results. The pharmacist dislikes to put up on prescription more

medicine than it is evident is needed, simply because it is cheap; it calls for explanations and creates objections, yet if the quantity be very small and of a very common and cheap drug, he hesitates to make a proper charge for his time, extra labor, etc., in the matter, lest the patient have read the prescription and severely criticize his action. In the night, such calls upon the pharmacist are all the more unsatisfactory.

A consultation of their patrons' and their own interests by the physician and the pharmacist clearly indicates the mutual advantage in a certain amount of dispensing by the physician; and the lessened number of prescriptions will create a more than equivalent satisfaction and readiness to purchase the necessary prescriptions.

Those prescriptions the physician should take pains to write legibly in the interest of the patient, the pharmacist, and himself.

It is to be hoped that by means of proper consideration and concessions, the physician and the pharmacist will be brought into closer touch with each other, more dependent upon each other, with a still higher regard each for the other; that the physician will more fully realize that he may look to the pharmacist for valued aid and assistance; that the latter is qualifying himself to relieve the physician of various chemical analyses, to make various microscopical examinations for him, and to prove his efficiency and interest as a coworker in the cause of suffering humanity. The pharmacist should likewise realize that the physician is his natural and true friend, and approached in such spirit will enthusiastically cooperate with him in the advancement of pharmacy and phamaceutical interests.

CHRISTIAN SCIENCE.

Dr. W. S. Robbins of this city, writes us that he has had under his professional care three cases that had been treated by Christian Scientists. The first case was one of phthisis, a young lady eighteen years of age, both of whose parents died of phthisis. After one year's treatment at a dispensary she went to New York where, in two weeks, she was "cured" by Christian Science. In six months she died.

The second case was one of valvular disease following articular rheumatism. This patient was also "cured" by Christian Science, but died one year afterward from the same cardiac affection. The third case was of phthisis, pronounced "cured," but a fatal result supervened in about one year.

Dr. Robbins was personally acquainted with all these patients and thoroughly familiar with all the facts. He informs us that he has heard of several other cases with similar results.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

ESSENTIALS OF OBSTETRICS. By Charles Jewett, A.M., M.D., Sc.D., Professor of Obstetrics and Pediatrics in the Long Island College Hospital; assisted by Harold F. Jewett, M.D. 12mo, illustrated, pp. 357. Lea Brothers & Co., New York and Philadelphia, 1897.

To the members of the medical profession in Brooklyn the fact that Dr. Charles Jewett is the author of this volume upon "The Essentials of Obstetrics" is a sufficient guarantee that a substantial contribution has been made to the literature of midwifery; others, in whose hands the volume may be placed, will, after its perusal, arrive at the same conclusion. Like the "Outlines of Obstetrics," written four years ago by the same author, the book does not claim to be encyclopedic. Its title, however, accurately describes its contents, and it will be found a valuable guide to a more elaborate treatise.

Since works of this character are of especial value to the student, prominence is rightly given to the physiology of pregnancy, labor, and the puerperal state. The clear and practical directions for the proper care of women passing through this series of ordeals will, if followed, be the means of preventing many of the evils that develop as a result of meddlesome midwifery, and from a disregard of the rules of asepsis—as essential for the general practitioner as for the most distinguished surgeon.

The pathology of the same topics is also considered, but, on account of the numerous complications that may arise, the text is of necessity brief. A good perspective of the subject is maintained throughout, and the most important anomalies are brought out in bold relief.

For the practitioner the last chapter of the book is of most value. In it are described the induction of premature labor, version, the use of forceps, and other operations of obstetric surgery.

Dr. Charles Jewett was the first person in this country to perform symphysiotomy, and it is but simple justice to state that it is largely due to his personal efforts and enthusiasm that the value and indications for the operation have been recognized, and another weapon in the warfare against dystocia has been placed in the hands of the physician. We are not disappointed, therefore, in the chapter devoted to this topic. The technic is fully described and supplemented with well-chosen illustrations, so that the combined result offers the best description of the procedure that is available for the guidance of the obstetrician.

HENRY P. DE FOREST.

SYRINGOMYELIA. An Essay, to which was awarded the Alvarenga Prize of the College of Physicians of Philadelphia for the year 1895. By Guy Hinsdale, A.M., M.D. Philadelphia: P. Blakiston, Son & Co., 1897. Pp. 74. Price, $1.00.

This excellent monograph is dedicated to Dr. S. Weir Mitchell, and was originally published in the *International Medical Magazine*, 1896–7. It is based on a study of 120 cases (118 from the literature and 2 new).

Besides a very careful analysis of the subject, there is a useful section of four pages on "Syringomyelia Associated with Other Diseases." Under this head he says: "As to the relationship of lepra and syringomyelia we believe that an individual who may exhibit symptoms of syringomyelia or Morvan's disease, may have, in addition, leprosy." . . . "The weight of authority is in favor of the duality of the diseases."

While the so-called dissociation symptom (analgesia and thermoanesthesia with preservation of tactile sense) still remains one of the most characteristic features, he points out that it may occur in several other conditions and is not an infallible guide.

Under treatment he makes no mention of surgical attempts on the cord-lesion itself.

There is an appended bibliography of 388 numbers, which, with references in the text, brings the total to 514. Besides a table of contents there is also an index.

The above statement of the scope of this work is all that can well be given in a general medical journal.

WILLIAM BROWNING.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia; Attending Physician to the Medico-Chirurgical and Samaritan Hospitals, Philadelphia, etc. Illustrated. One volume. Pp. 1287. Price, $6.50.

When we first opened this book we exclaimed that the author must be a man of some faith and courage to undertake the task of presenting the field of practice of medicine in a way that would invite much attention. This field has been so thoroughly handled, in whole and in part, of late years, that not much untilled soil opened up to view. However, we applied Daniel Webster's test, examination of the table of contents, and were immediately impelled to read the rest.

The author modestly announces in his preface that "the work is meant to introduce the student to the present state of our knowledge of the practice of medicine in general and of the diagnosis, differential diagnosis, and treatment of disease in particular." He has done his work more than well and we would suggest to him that in his next preface he include the practitioner as a beneficiary of his labors. The latter surely will recognize its value as a work of reference and aid in his daily walk.

The author gives bacteriology its deserved place in the department of etiology. This feature alone will commend the book to use.

We find fifty-six diagnostic tables scattered through the work. They are useful, concise, and of value.

We are struck by the thoroughness and logical arrangement of the contents. The appearance among the infectious diseases of dysentery, lobar pneumonia, acute articular rheumatism, phthisis, and tuberculosis generally, and some others, will cause some eyebrows to go up. We think it much to the purpose.

The chapter on typhoid fever is very full and admirably written. We note the statement that "if Widal's reaction is not obtainable in a case sick over a week typhoid fever may be excluded." Unfortunately, recent experience will not guarantee the Widal test. In the chapter on influenza, la grippe, we are glad to see the bacillus of Pfeiffer emphasized as a cause. This diagnostic test was given to the world in 1892. Possibly a more frequent application of it might decrease the number of cases of this fashionable disease.

The chapter on diphtheria is exceedingly well written. The statement here made that the antitoxin treatment "has now passed beyond the stage of uncertainty and experimentation," is a truth we wish could be more thoroughly impressed on the minds of the brethren. We are sorry to say the mercurial fumigation introduced by Dr. Job Corbin of this city, for the relief of laryngeal stenosis, is not mentioned. It is of value, great value.

We are surprised to see the use of antipyrin recommended in the treatment of acute articular rheumatism. The caution that the heart be watched carefully during its administration is timely. We are inclined to think that better and safer remedies have replaced it.

In tetanus he fails to mention iodin as a dressing for the wound. It has been shown to be the antiseptic in these cases.

In diaphagmatic pleurisy no mention is made of the relief of pain afforded by upward pressure as a means of diagnosis. We notice with pleasure the prominence given to the sphygmographic tracings in the chapter on the circulatory system. We would call attention to the chapter on neuroses of the heart—in fact, the whole division.

In the chapter on stomatitis we find no mention of the condition produced by the aspergillus nigrescens. Dr. James M. Winfield of this city has described the condition graphically. It is important to bear it in mind in our differentiation. In the treatment of gangrenous stomatitis no mention is made of the almost specific action of liq. ferri subsulphatis. Dr. J. D. Sullivan of this city has described the treatment. We can testify to its efficacy from an experience in one of the asylums in this city.

The chapter on diseases of the stomach is very full and entertaining.

In the chapter on appendicitis the statement is adopted that fecal concretions are the main cause in nearly one-half, and foreign bodies in considerably less than one-quarter, of all cases. To say the least, that is questionable. Dr. G. R. Fowler of this city demonstrates that very clearly in his work on appendicitis. We are glad to see that the term idiopathic peritonitis has been thrown into the waste-basket.

We find no mention of Dr. E. H. Bartley's method of quantitative estimation of urea. We have gone over the book carefully, and with much pleasure. We thank the author. We feel that he has added to our literature a book of real value—a thoroughly useful book.

CLINICAL LESSONS ON NERVOUS DISEASES. By S. Weir Mitchell, M. D., LL. D. Philadelphia: Lea Brothers & Co., 1897. Pp. 305. Price, $2.50.

Probably no one has done so much to bring credit to American neurology as has the honored author of this work. And it is a matter for thankfulness that his literary excursions in other directions have not deprived the profession of further contributions in his original field.

In general, the present work can best be compared with his "Lectures on Nervous Diseases, Especially in Women," 2d edition, 1885, and the many who have appreciated that volume will gladly secure this also.

It is disorders of function rather than organic changes that occupy his attention. Hysteria, of course, comes in for a large share.

In Chapters II. and III. he goes outside his usual line so far as to take up distinctly mental disorders, a considerable part of Chapter II. being devoted to *recurrent seasonal melancholias.*

In Chapter IV. he again takes up a favorite subject with him; *viz.*, "Disorders of Sleep." Since we pass such a considerable portion of our lives in slumber, it is an important field for study. Just as the speculative psychology of former days has given way to a science with a firm physiological basis, so do such studies as these pave the way to a comprehensive and substantial pathology of sleep.

Among other things he there points out that hallucinations in the predormitium (period of going to sleep) are suspicious prodromes of insanity, though not necessarily so. To some extent the same holds for the post-dormitium.

Some twenty-eight pages and several illustrations (two in color) are devoted to a consideration of erythromelalgia, a condition first described by him.

Many other interesting observations are recorded, as the rare "Wrong Reference of Sensations of Pain," not irradiated nor yet quite associated sensations, nor even the manifestation termed allochiria.

In the study of these finer functional aberrations he reminds one somewhat of the late Dr. Beard. His main effort is directed to the recording, not to the explaining, of these little-known phenomena. That must be sought elsewhere or come later.

On page 77 is a slight typo—lips evidently for lids.

The book as a whole is one of that unusual class that do not call for criticism, but instead claim appreciation.

WILLIAM BROWNING.

A PICTORIAL ATLAS OF SKIN DISEASES AND SYPHILITIC AFFECTIONS. By E. Besnier and others. London: The Rebman Publishing Co. Philadelphia: W. B. Saunders. Published in twelve parts; price, $3 per part. Part XII.; 1897.

This is the last part of a series which is as near perfection as anything known can be. We have already spoken of the wonderful truthfulness to nature which characterizes the models in the museum of the Saint Louis Hospital in Paris, and the remarkably faithful reproduction of these models in the photolithochromes of the "Pictorial Atlas." What has been thus said of previous parts is equally true of Part XII. It contains the following plates,

with explanatory woodcuts and text: Syphilitic Chancre of the Nostril, and of the Tonsil; Xeroderma Pigmentosum; Impetigo Contagiosa; Urticaria Pigmentosa, with Atrophic Spots Arranged in Transverse Bands; Syphilitic Chancre of the Lip and of the Tongue.

ARCHIVES OF THE ROENTGEN-RAY (formerly *Archives of Skiagraphy*), Edited by W. S. Hedley, M.D., M.R.C.S., in charge of the Electrotherapeutic Department, the London Hospital; and Sydney Rowland, M.A., M.R.C.S. Editorial Committee: Mackenzie Davidson, Esq., London; John Macintyre, M.D., Glasgow; Thomas Moore, Esq., F.R.C.S., London; W. J. Morton, M.D., New York; Campbell Swinton, M.D., Esq., London.; Lyman Thomas, Esq., Cardiff; R. Norris Wolfenden, M.D., London; Silvanus Thompson, D.Sc., F.R.S., London; W. White, M.D., Philadelphia. London: The Rebman Publishing Co. Philadelphia: W. B. Saunders, 1897. Vol. II., No 1; price, $1.00.

Our readers are all familiar with the *Archives of Skiagraphy*, which is replaced by this publication. In addition to the pictorial record there will be in the new Archives a certain amount of useful letter-press which will contain the proceedings of the recently formed Roentgen Society, together with original communications and correspondence; it will deal with "the new radiation," not only in view of its practical usefulness, but from the still wider standpoint of its scientific bearings.

The number before us contains an article, entitled "On the Nature of Roentgen's Ray," by Silvanus P. Thompson, D.Sc., F.R.S., and one by W. S. Hedley, M.D., on "Roentgen-Rays; a Survey, Present and Retrospective." The plates are as follows: A Case of Fractured Olecranon; Carcinoma or Aneurism; Phthisis; Vesical Calculus; False Joint; Method of Localizing a Bullet; Congenital Dislocation of Hip, and the First X-ray Picture of An Adult Body at One Exposure.

THE MENOPAUSE. By Andrew F. Currier, A.B., M.D. Published by D. Appleton & Co. 309 pages.

This book is not only a mine of useful knowledge, but a key which opens to the physiologist, pathologist, and the physician questions, principles, and phenomena of far-reaching importance. The author has simply placed himself and his subject at the best. It would be fortunate for the medical profession if more authors were at once as analytical and comprehensive in their statements as he has been. No student of medicine, no practitioner of medicine can pursue this book without being assured that its author is thoroughly familiar with his subject.

The plain and and logical arrangement of the various topics and their masterly treatment shine forth in every page. In no part is this more apparent than in that portion which refers to the "indications for the artificial production of the menopause," where, in a single sentence, he brushes away

the sophistries which have clouded the judgment, and belittled the only real scientific method of treatment. It is to be hoped that Dr. Currier's systematic authorship will not end with this contribution. WALTER B. CHASE.

A SYSTEM OF PRACTICAL MEDICINE BY AMERICAN AUTHORS. Edited by Alfred Lee Loomis, M.D., LL.D., and William Gilman Thompson, M.D. Vol. II. Illustrated. Lea Brothers & Co., 1897. Pp. 941.

Volume I. of this system has already been noticed by us. Vol. II. contains Diseases of the Respiratory System, of the Circulatory System and Mediastinum, of the Blood, of the Kidneys, of the Bladder and Prostatic Glands.

The only article by the late Professor Loomis is that on Endocarditis. Professor Thompson's name does not appear among the contributors.

The contents of this volume are as follows: Diseases of the Respiratory System, by Drs. S. E. Solly, E. G. Cutler, A. L. Mason, R. H. Fitz, W. W. Gannett, and H. B. Whitney; Diseases of the Circulatory System and the Mediastinum, by Drs. E. G. Cutler, W. Coleman, A. L. Loomis, C. E. Quimby, J. T. Whittaker, and I. S. Haynes; Diseases of the Blood, by Drs. F. C. Shattuck, and R. C. Cabot; Diseases of the Kidneys, by H. P. Loomis, J. N. Danforth, and J. Tyson; and Diseases of the Bladder and Prostate Gland, by Drs. J. N. Danforth and T. D. Coleman.

HARE'S PRACTICAL DIAGNOSIS. The Use of Symptoms in the Diagnosis of Disease. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materica Medica in the Jefferson Medical College of Philadelphia, Laureate of the Medical Society of London, of the Royal Academy in Belgium, etc. New (2d) and revised edition. In one octavo volume of 598 pages, with 201 engravings and 13 full-page colored plates. Cloth, $4.75. Philadelphia: Lea Bros. & Co., Publishers.

The first edition of this book was taken up very quickly. This is a proof that it found favor in the eyes of many, and satisfied a want. The second edition comes to us with additions and the combination of the two indexes which appeared in the first.

The author states the object of the book in the words, "the symptoms used in diagnosis are discussed first and their application to determine the character of the disease follows. In other words, this book is written upon a plan quite the reverse of that commonly followed, for in the ordinary treatise on diagnosis the physician is forced to make a supposititious diagnosis, and having done this, turn to his reference-book and read the article dealing with the disease supposed to be present, when, if the description fails to coincide with the symptoms of his case he must make another guess and read another article."

This is a rather strong statement. It is certainly worthy of the analytical and synthetic diagnosis itself as it contains a mild insinuation of a habit of guessing. It would appear to assume that the diseased conditions met with are all clean cut and easy of classification, for the announcement is made

that "In this book, however, the discovery of a marked symptom will lead directly to the diagnosis." We will accept that offer and try our hand on the symptom "vomiting." We open the index and are referred to some seventy conditions. An attempt is made to describe each. We lay down the book with the exclamation that the path to the diagnosis is not very direct. We take from our library another book on diagnosis. We find "vomiting" in its index. We close this with more light on the subject. Why? Because the author takes it up in a general way and gives us only eight conditions. He follows much the same plan, but does not weary us with the enumeration of sixty other conditions.

Unfortunately, the complicated, mixed condition is the one we most frequently deal with, and a marked symptom often tells but part of the story.

This book has gathered together an immense number of symptoms presented by diseased organs. It will require the skilful diagnostician to locate them in those organs before he can make any more use of this key than the other excellent works we have on this subject. Or, in other words, we must first analyze our case; then, if we are capable of doing that, we are in a fair way, by a process of synthesis, to arrive at a conclusion. A man capable of determining that there is a cavity in the lung, or that there is a circumscribed consolidation, or that a murmur is located at a particular valve of the heart, or that pain is in the skin and not a deeper tissue, or that the liver is larger or smaller than normal, or nodulated, or that certain skin eruptions are of such and such a character, will be the one who has classified his knowledge and schooled himself to the process of thinking. He will put before you his information gained in such a logical manner that there will be no mistake about it. He surely is not the man the author describes as making another guess when the book description fails to coincide with the results of his labor. Who is the man, then, this book is written for which claims to give the diagnosis directly if a marked symptom is discovered? We confess that we fail to discover the accomplishment of the task the author laid out for himself.

The book is of value. It contains many fine illustrations. It will be an aid in diagnostic work. It has a slight tendency to foster that habit which the slang of the day denominates "snap diagnosis," although explicit warning against the latter is given in the first chapter.

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

ENTERED AT BROOKLYN, N. Y. POST OFFICE AS SECOND CLASS MATTER.

EDITOR IN CHIEF:
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VOL. XII. No 2. WHOLE No. 122. | BROOKLYN, N. Y., FEBRUARY, 1898. | Single copies 25 cents $2 a year, in advance

ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

THE CLINICAL SIGNIFICANCE OF MOVABLE KIDNEY.

BY GEORGE MCNAUGHTON, M.D.

Movable kidney is not a new lesion; it is likely that it has always existed, yet it has been recognized only comparatively recently.

Up to January 1, 1896, there had been only about 1500 cases reported. That this does not by any means include all that have been diagnosed may be proven by individual experience. I am sure that I have seen more than one hundred cases. An abnormal condition occurring so frequently is worthy of more attention than has heretofore been given to it, particularly when in many cases it is accompanied by a combination of symptoms which are fairly constant and when the diagnosis can be so easily made.

This subject is of special interest to the gynecologist, general surgeon, the practiser of internal medicine, and the neurologist.

To the gynecologist because about one woman out of every five or six who is ill enough to consult him for pelvic trouble will furnish an example of wandering kidney.

To the general surgeon because this natural tumor found in a wrong place may mislead him into operating for appendicitis, or perhaps a distended gall-bladder.

To the neurologist because many of the symptoms present are functional and due entirely to disturbed nerve service.

To the practiser of internal medicine because of the disturbances of the intestinal tract, which prove very rebellious to treatment unless the true condition be recognized.

This condition exists in a large number of women, and men as well, who believe there is something wrong, yet are assured by their physician that he can discover nothing to account for their subjective symptoms; consequently, too often these patients are classed as hysterical and treated accordingly. The main reason for presenting this paper is to call your attention to a morbid condition, presenting distinct symptoms, easily verified by a physical examination, yet in most cases overlooked by the general practitioner, and in many instances by the specialist.

The frequency in women has been referred to. I am not aware that any one has published statistics as to the frequency in the male, but I know that it occurs more often than has been supposed. Most of the reports have come from gynecologists, whose interest in the male sex is naturally quite small. I have seen seven cases in the male, youngest seventeen years old.

It is not unlikely that the phantom tumors described by older writers were in many instances wandering kidneys. It is quite easy to understand how such an error could occur when we remember what a slippery body this organ is and how very slippery are the walls of the cavity which contains it. This accident is supposed to be most likely to occur in persons between the ages of twenty and twenty-five years. The right is most frequently displaced, very likely because of the proximity to the liver.

A wandering kidney may be mistaken for a tumor of the spleen, liver, omentum, ovary, or uterus. I have seen a wandering kidney mistaken for a uterine fibroid with a long pedicle. I once made a diagnosis of wandering kidney when the tumor proved to be a distended gall-bladder containing calculi. I do not think this mistake will be repeated, and now regard it as quite inexcusable.

The causes are various, as external traumatism, sudden loss of adipose, frequent child-bearing, tight-lacing, sudden strain, as by lifting, etc.

Women who have movable kidneys are apt to feel best when they are pregnant, for then the organ is held in its proper place by the enlarged uterus.

It should not be forgotten that this condition is sometimes

present and fails to produce the slightest disturbance, and never has so far as can be learned. In other cases considerable distress will be produced for a time; this may be followed by a long period without inconvenience. I have seen several such; two suffered excruciating pain very like that of renal colic, so severe as to require injections of morphia. Neither has had a recurrence.

The chief symptoms as ordinarily found are those of disturbances of digestion. Most of the patients that I have seen have what they call, and in many instances their physicians also, intestinal indigestion. In one case treated for several years by myself, during that period I many times examined his abdomen, expecting to find a morbid growth. He had been a very lucrative, but otherwise unsatisfactory patient. I discovered a loose kidney, and directed him to wear a belt. I have not seen him more than half a dozen times since.

Pain near the lower border of the true ribs, at the left of the median line, is perhaps the most constant symptom. When a patient complains of pain in that particular region I always examine, and usually find a movable kidney.

Sometimes a circumscribed inflammation is set up and fixes the kidney in an abnormal position, thus permanently dislocating it. If this should occur in the iliac fossa on the right side, it might easily be mistaken for an appendiceal abscess.

I can recall the following symptoms: Pain as just stated; pain in the opposite renal region, perhaps due to the increased work put upon the normal organ; eructation of gases from the stomach, intestinal flatulence, hematuria, vesical tenesmus, hot flashes, tachycardia. In one case where this symptom was very severe, on several occasions the patient was thought to be dying by her physician and attendants. The symptoms came on after childbirth.

Menorrhagia is a very frequent complication, and simple curetting will not relieve it. Support to the kidney is required in addition, else this symptom will surely return. Menstrual pain is also often noted. Movable kidney is not an infrequent complication, if not a cause, of membranous enteritis. It is not unlikely that many ovaries have been sacrificed because of uncertain symptoms induced by a kidney loose from its moorings.

Mental depression, almost melancholia, occurred in one patient, a man. He complained of abdominal distress, heart palpitation, severe and rapid; both of his kidneys were movable to a considerable extent, which condition I have no doubt contributed

much to his misery, and perhaps it was the sole cause. I saw this patient only once, therefore I cannot state whether he was benefited by wearing a support.

In seeking an explanation for the various and peculiar symptoms, we are obliged to look to the nervous system. The nerves of the kidneys are small, about fifteen in number, have a small ganglion, and are derived from the solar plexus, the lower and outer part of the semilunar ganglion, and from the lesser splanchnic nerves; they communicate with the spermatic plexus in the male and the ovarian in the female; also, with the fundus uteri. It is evident that we must look to the sympathetic nervous system for an explanation of the various symptoms.

The diagnosis of movable kidneys is very easy, particularly if one's fingers are educated in tactile work. The patient is placed on the back with legs and thighs slightly flexed; in this position the kidney will usually slip back in its proper place. The physician grasps the side just between the lower rib and the crest of the ilium, not too tightly, else the kidney will be held in place. The patient is directed to take a long breath, when the kidney, if loose and is not held too tightly, will be felt passing beneath the fingers or thumb as the case may be. After it has passed beneath the fingers, the parts are grasped a little closer and the kidney is held in its abnormal position, when it can be easily felt with the other hand, and made to slip back to its normal position. The treatment is not so easy as the diagnosis. I have prescribed a number of different kinds of support, but on the whole the most satisfactory has been the ordinary abdominal support which is usually worn after a celiotomy. Men can use an ordinary belt worn next to the skin. These supports should always be applied when the patient is on the back. Many patients learn to locate the kidney and apply the support accordingly.

The amount of pressure required to hold a kidney in place is very little, the difficulty being to apply it properly.

Means should be taken to increase the deposit of adipose. Massage has been recommended. I should not consider it even rational treatment, and would expect no good result. The Weir Mitchell scheme of keeping patients in bed and feeding them to their limit might be excellent treatment. May it not be possible that some of the brilliant results obtained by this sytem of treatment may be due to the restoration and keeping of misplaced kidneys in their proper position?

The surgical treatment is most likely to prove of permanent

worth, but I have in one case seen both kidneys again become loose and a return of the symptoms, which had been relieved for several months.

Improved methods of operating will be adopted from time to time, and no doubt exact results obtained. I have never seen a case which threatened life, but some have been reported. I have seen several patients who preferred death to the misery in which they lived.

The patient with a wandering kidney is a perpetual object-lesson to the neurologist and the gynecologist, and sometimes a reproach to both. So wrote a New York surgeon.

DISCUSSION.

Dr. W. B. Chase: Mr. President, I have enjoyed this very concise and comprehensive paper of Dr. McNaughton's. I am conscious of the fact that this is a lesion which I in former times had overlooked, and in this particular I do not know that I differ in my experience very much from other members of the profession. I think when the symptoms which the Doctor has enumerated and classified so succinctly are understood, it is almost inexcusable that the lesion should not be recognized.

I am particularly gratified to hear of the Doctor's results by the application of mechanical support, externally applied, and if that method of holding the kidney in place is serviceable, it certainly will relieve the surgeon or gynecologist of a good deal of responsibility in attempting to fix it by surgical methods.

I have seen some cases somewhat recently. One I recall in particular—a case of a woman whose health was completely overthrown and her nervous system suffering very severely, in whom there was a movable kidney on either side.

I believe this paper will be of benefit in calling the attention not only of the members of this Society, but of the profession generally as they read it, to the necessity for careful investigation, that they do not pass over so important a lesion, which is present in relatively so large a number of cases.

Dr. Chas. Jewett: The paper interests me, Mr. President, not only for what it teaches, but as another proof of the practical knowledge and skill of the writer as a gynecologist.

With regard to the frequency of movable kidney, I would have been disposed to believe the lesion even more common than Dr. McNaughton states if we include all cases in which some motion can be demonstrated. My impression is that more or less mobility has been detected in nearly half my office examinations,

not always, of course, pathological mobility. I have been struck with the fact that a goodly proportion of movable, and even floating, kidneys give rise to no symptoms. The symptoms I suppose result from disturbances of the sympathetic, yet it is remarkable that many patients tolerate the mobility with almost entire absence of symptoms. It has frequently been my experience to find a kidney movable to the extent of four or five inches, and yet the patient be ignorant of anything wrong. I recall a recent instance in which a kidney even more movable did not seem to bear any relation to the patient's slight indisposition. In a case examined this afternoon this was true; the symptoms could not be fastened upon the wandering kidney.

With reference to diagnosis, the method of examination the Doctor has described is, I think, the most satisfactory. Grasping the parts with the thumb in front over the abdominal wall and the fingers behind between the crest of the ilium and the ribs, the patient then being asked to breathe, the kidney comes down with the inspiration if the pressure of the fingers is not too great. With the fingers of the other hand upon the abdomen below, the kidney can be felt as it is shot out of the grasp of the first hand. Mapping it out and pushing it back, it comes down with the next inspiration.

In the case examined this afternoon, the impact of the kidney against the abdominal wall as it slipped from the grasp of the hand was not only perceptible to the touch, but was plainly visible.

Referring to the remote effects of movable kidney, one of the curious concomitants is a membranous enteritis, which has been mentioned by the author of the paper. This sometimes, at least apparently, results from the floating kidney, if we can so assume from the fact that anchoring the kidney in a certain proportion of cases is sometimes the means of cure. The operation, however, I think has been done much oftener than necessary. The patient is in most instances, as the Doctor has pointed out, quite comfortable with a supporter. In thin subjects (and most of these patients are emaciated) the ordinary support is uncomfortable. In women, therefore, I have sometimes advised lacing the lower portion of the corsets moderately tight and leaving the upper part loose, hanging the clothing from the shoulder. This has often answered well without the inconvenience of extra apparatus.

Dr. Frank Baldwin: I have nothing to add, Mr. President, only I wish I had heard that paper several years ago. I would

like to ask the Doctor if riding the bicycle has seemed to make the kidney movable in his experience.

Dr. L. Grant Baldwin: I have been interested with all the rest in Dr. McNaughton's paper, and am glad to know that he has succeeded in making so many of his patients comfortable without operation, for I firmly believe that *almost* as many kidneys have been stitched up that ought not to have been as ovaries removed, and with as little excuse. It is only recently that a patient came back under my care who had been attending at the College clinic on and off for a distressing endometritis with regular attacks of vaginitis after each menstruation, and I had succeeded in making her fairly comfortable, although by no means well. Her chief symptom was pain in her *left* side, never in the right, which was worse when she got up in the morning, and after she had been around on her feet for a little while, or had stood up to give a music lesson, which was her occupation, she felt better. Some friend of hers advised her to see a gentleman who believes in stitching up every kidney that is movable—I believe four or five centimeters is sufficient—and he makes a distinction between movable and wandering kidney—and he advised her to have her kidney anchored at once. She came to see me about it, and I advised her not to. Later I had her see Professor Skene, and he also advised against it, but in spite of that fact she went to another enthusiast who did anchor her kidney, but he anchored her right kidney instead of the left. The left one was as movable as the right, and why the right was chosen instead of the left I was unable to determine. The facts are these: This operation was done nine weeks ago. At the time she went to the hospital to have the operation done she was able to be about and earn her living. She has not been out of bed since, and now has a well-marked phlebitis in the right leg and is positively unable to do anything; and the pain in her left side is better when she feels the pain in the right, simply because that is so much worse. There, I believe, is a case absolutely and entirely unjustifiably treated. She had no symptoms referable to her kidneys whatever in the judgment of several competent medical men. Not long ago I also saw a case at the College clinic of a sinus from each kidney; the woman was passing urine from the back on each side, and that had continued for something over a year since the operation. It is needless to say how wretched she was. I have seen a number of unfavorable results, which would seem to me are too un-

toward to make us advise putting sutures through the kidney unless there is some *absolute* indication for it.

Dr. McNaughton: Dr. Jewett's method of holding the kidney by means of the corset I think is an excellent one. If the woman is so constructed that she can wear a long corset, that is, one an inch longer than that usually worn, and get a certain amount of compression on the line, it forms a good support. I have seen several patients who have succeeded in this way, and it is more comfortable than wearing an abdominal support.

Dr. Baldwin's question I do not know anything about. I know of several women who are enthusiastic bicyclists who have movable kidneys, but it does not seem to disturb them any; they keep on riding just the same.

I have operated twice; one was as satisfactory in final result as I ever have had follow an operation. She was a nurse. She had a pulse averaging over 120, was suffering a great deal of pain, and no reason could be found for it until a loose kidney was discovered. This was probably produced by a blow which she received on her side; at least the symptoms commenced at that time. She got very thin and was perfectly miserable. The operation was done, and I never saw a patient suffer so much in my life. The pain was simply atrocious for four or five weeks, but she finally got well, went home, and gained twenty or thirty pounds in weight. She feels well, and her pulse now is an average of about 86 to 90, and the result is exceedingly satisfactory.

Another case—the woman is still under observation. She suffered also a great deal. I think that one should hesitate considerably before urging an operation of that kind, because of the terrific suffering of the patient. I can imagine some patients might sink under it. At the same time, I know there are cases which deserve the operation and should have it done. There have been some recent experiments made in opening the kidney in acute nephritis, laying the kidney structure open by incision, thus showing that the kidney will bear surgical manipulation without interfering with its function. Therefore, much can be done with an easy conscience.

ROBERT A. BLACK, M.D.

In the reorganization of the Health Department under the new charter of the City of New York, Dr. Black has been appointed Assistant Sanitary Superintendent of the Borough of Brooklyn.

TUBAL PREGNANCY.

BY WALTER B. CHASE, M.D.,
Gynecologist to the Bushwick Hospital, Brooklyn, N. Y.

Read before the Medical Society of the County of Kings, September, 1897.

Among the grave complications threatening the reproduction of the species, few if any, subject the mother to equal risk and none require on the part of the attendant more accurate judgment, wise discretion, with courage and ability to meet the emergency, than ectopic gestation. Owing to the magnitude of the subject I shall confine myself to-night to that portion of the topic included in tubal pregnancy in the early months, with its complications, considered principally from the clinical standpoint.

The etiology of tubal pregnancy is not well understood. Bland Sutton, in his treatise, "Surgical Diseases of the Ovaries and Fallopian Tubes," 1891, suggests that it is due to desquamative salpingitis, and the destruction of the proper ciliated epithelium, placing it in a condition similar to the uterine cavity after menstruation. In his new work—"Sutton and Giles on Diseases of Women"—a careful series of investigations on an abundant supply of material teaches us that a healthy Fallopian tube is more likely to become gravid than one which has been inflamed.

Apparently age and previous pregnancies bear little relation to its occurrence. It would be of interest to study its physiologic growth and development in this abnormal location, and to trace the progressive changes incident to the expansion of the tube, and the development of the ovum, but this must be omitted.

As the embryonic growth advances, rupture of the tube must follow, except perhaps in those rather problematical and rare cases in which tubal abortion is said to occur, in which the development of the ovum is within the ampulla of the tube.

A simple and rational classification of the complications which are involved in tubal pregnancy is as follows:

1. Primary intraperitoneal rupture of the gravid tube with escape of its contents into the peritoneal cavity.

2. Secondary rupture in the intraperitoneal cases, when the life of the ovum is not compromised by its escape from the tube,

and the placenta finds new attachments within the peritoneal cavity by which its life is sustained.

3. Primary extraperitoneal rupture when the gestation-sac extrudes itself into the folds of the broad ligament.

4. Secondary rupture of the extraperitoneal or intraligamentous variety when the life of the ovum is not compromised by its escape from the tube. In this case the ovum may or may not escape from the fruit-sac.

Unfortunately for the pregnant woman, the presence of tubal pregnancy is usually unsuspected until her life is in jeopardy. The hazard is greater from the fact of its relative infrequency, and the liability that the attendant, not having previously seen a case, fails in early rupture, to differentiate the symptoms. So far as the present status of our knowledge extends, it would seem that women previously sterile, or who have not recently borne children, are more susceptible to this abnormality of conception.

The common symptoms of rupture of a gravid tube are these:

After having skipped one or two menstrual periods the woman has violent pelvic pain, attendant with nausea and perhaps vomiting, great vital depression, pallor, lowering of temperature, rapid and feeble pulse, with a train of symptoms complex in their character due to shock and syncope. If the hemorrhage is not controlled or abates, spontaneous death may ensue. The symptoms are often associated with hemorrhage and membranous or shreddy discharge from the vagina, while in some cases they are wanting. A critical examination of the decidua so extruded furnish the opportunity of disapproving or confirming the presence of tubal pregnancy, by showing the absence or presence of chorionic villi. Doubtless superficial observers may have mistaken tubal rupture for miscarriage, or supposed the pain due to some form of dysmenorrhea, particularly so when the hemorrhage was not extensive and the shock and depression had disappeared, before the case came under observation. The rational symptoms of uterine pregnancy may, or may not, be present. Milk in the breast is a symptom of positive value. To exclude diagnosis of tubal rupture because the symptoms fall below the clinical picture of a typical case might be a serious mistake; as it is a well-known fact that pain, shock, and disabling influences, are not always present to a degree which would, from superficial observation, warrant such a conclusion. The manner and location of the primary rupture bear an important relation to the subsequent history of the case. To better comprehend the symptoms present it would be

well to consider the anatomical causes which lead to rupture in tubal pregnancy.

For reasons which time forbids to describe minutely, the impregnated ovum has found attachment to some portion of the Fallopian tube outside the uterus, sufficient for life and development. In the growth of the embryo, the tube becomes distended and ruptures, sometimes through a simple opening, and at other times there are multiple openings, like the separation of the staves of a barrel. Dr. Grant Baldwin reported one to the Brooklyn Gynecological Society.

While the whole Fallopian tube is covered by the pelvic peritoneum the outer third alone is free along its whole circumference, while along the inner two-thirds this peritoneal attachment is continous with the broad ligament and serves as a mesentery for its attachment thereto. In this increasing pressure, due to embryonic development, the tube ruptures at the point of least resistance. If in the outer third the escape of its contents, and the hemorrhage resulting therefrom is into the free peritoneal cavity with no physical barrier to hemorrhage, which may go on until the abdomen is distended and results in death. If the rupture takes place in the proximal two-thirds, resistance is least over the portion of the tube not so closely invested with peritoneum, and the embryo in its attachment together with the hemorrhage is into the layers of the broad ligament. Here the liability to extensive hemorrhage and consequent fatal syncope are considerably diminished by the investing peritoneum. The pressure hereby induced may dissect up the broad ligament extensively, and in proportion as this obtains the pain and shock are increased, and the danger augmented.

Physical symptoms before and after primary rupture vary with circumstances.

In primary rupture into the peritoneal cavity, the circumscribed mass which might previously have been felt near the extremity of the tube, has partially disappeared, but there will be found an increased feeling of resistance of the pelvic floor, with a fulness about the cervix and in Douglas' cul-de-sac, due to effused blood in the peritoneal cavity. There is tenderness on pressure, particularly near point of rupture. When the rupture has taken place within the mesometrium, there is a more or less fluctuating mass with marked tenderness in one or the other broad ligaments. The farther advanced the pregnancy the more easily a mass is detected on one side or the other of the uterus, or should the Fal-

lopian tube be deflected from its normal plane, the fetal mass may be felt in the Douglas' cul-de-sac. It will not often happen the observer has the opportunity to make a bimanual palpation in tubal pregnancy prior to rupture; but this fact only emphazises the necessity of including it among the possibilities of the varying pathologic conditions found within the female pelvis, which require examination and treatment. The physical conditions most likely to be confounded with the rupture of tubal pregnancy are: perforation of a diseased and sloughing appendix, strangulated hernia, acute intestinal obstruction, and axial rotation of ovarian cysts.

One serious embarrassment in arriving at an accurate physical diagnosis is found in previously acquiring pathologic changes in the pelvic contents, including exudates, adhesions, and neoplasms; but a thorough interrogation and rational differentiation will usually lead to logical and safe conclusions. Should doubt yet exist the severity of the symptoms would warrant abdominal section. Berry Hart calls attention to the interesting fact that the original position of the placenta as related to the embryo bears an important relation to the future history of the case. If the embryo lies above the placenta, the latter becomes depressed downward between the folds of the broad ligaments, until arrested by the pelvic floor. If, on the contrary, the embryo develops below the placenta the embryo and the membranes burrow between the layers of the broad ligament, and the growth of the placenta is upward.

In tubal rupture the degree of disturbance incident to the development of the placenta bears a close relation to the resulting hemorrhage.

Treatment.—If the surgeon or accoucheur should be so fortunate as to detect a case of tubal pregnancy before primary rupture, no time should be lost in relieving the woman of danger involved in rupture. But one of two courses can be pursued after rupture; either reliance on the vis medicatrix naturæ, or the surgical art. Removal by excising the tube by laparotomy is the plain and unmistakable indication, and nothing short of this adequately meets the gravity of the situation. The hemorrhage must be controlled.

Should the ovum chance to die before primary rupture the contents, together with effused blood, may absorb, or suppuration with its consequences may follow, in which event knowledge of the fact might not be disclosed until the operation. If the case is seen at or immediately subsequent to time of primary

rupture, the same rule holds good. By reasoning that the hemorrhage may cease spontaneously and thus defer operative interference, the golden opportunity of saving a life may have been lost. If some time has elapsed since the rupture then the necessity for interference may not be imperative, and opportunity may be had to watch the development of the case to determine whether the mass enlarges, diminishes, or remains stationary—and from such data the rule of action will be formulated, according as the life of the ovum is, or is not retained.

Surgical experience generally, and here in particular, confirms the truth that the risk of operation is far less hazardous than the continuation of the hemorrhage which may not cease until life is extinct.

In operation for primary tubal rupture the abdomen should be opened from above, the bleeding arrested by ligation of open blood-vessels, the placenta, ovum, and clots removed. Operation per vaginam, offers inadequate space to effectively control bleeding vessels, and at the same time to be certain of having removed everything requiring removal. If the rupture is in the distal portion of the tube, its removal will include the sac and contents, unless new attachments have formed between it and some portion of the pelvic cavity immediately contiguous. If it is intraligamentous the new formation may be so perfectly removed and the control of the hemorrhage so complete as to warrant the closing of the broad ligament opening by running catgut suture. If not, one of two methods is admissible. Either stitch walls of the sac to abdominal opening, packing the same with gauze enclosed within a Mikulicz bag; or better still, make an opening from the broad ligament cavity into the vagina, either laterally or through Douglas' cul-de-sac, according to its location. Pack the sac with gauze, first carrying the end into the vagina, and closing the opening with catgut sutures, and then closing the abdominal wound. The advantages of downward drainage, when possible, are too obvious to require comment. If for any reason pelvic drainage is needful—as might happen from infection—it should be downward by gauze into the vagina. For this reason the vagina should always be made sterile before commencing the operation.

If, recent, the clots are best removed by free irrigation with normal salt solution. If, however, the clots have been within the pelvic cavity for several days, and are attached to the pelvic viscera, only gentle measures should be used for the detachment, for the risk of tearing the intestines more than counterbalances any

disadvantages from their presence. The peritoneum in most cases will take care of blood-clots not infected.

If death of the embryo follows rupture, and effused blood remains either in the pelvic cavity, or imprisoned within the broad ligament, the subsequent behavior of these cases is like that of pelvic hematoma. Under such conditions, particularly in the extra pelvic variety, vaginal incision may be, and often is, the better method of approach. Then the blood and *débris* may be removed, and efficient drainage established without risk of infecting the peritoneal cavity.

Every facility for thorough and rapid work should be at hand in these operations, and for this reason, other things being equal, the best results are likely to attend the work in a well-equipped hospital. The necessity, oftentimes, of placing the patient during the operation in the Trendelenburg posture is imperative and without it failure would ensue. It is highly essential for the patient's safety, in presence of exhausting hemorrhage and shock, that spartin, strychnin, digitalin, or nitroglycerin be administered hypodermically according to the existing indications. So too, high rectal enemas of hot normal salt solution may be advantagously employed with a view of augmenting the fluid in the circulation. If this is unavailing, intracellular or intravenous administrations of normal salt solution are the remedies par excellence.

In a case which I operated on a few months ago at the Bushwick Hospital, for tubal rupture about the tenth week, the operation taking place within twenty-four hours of its rupture, in which the peritoneal cavity was distended with blood, I found special heart-tonics and intracellular injections with free stimulation, entirely impotent to sustain the heart's action, for the simple reason that cardiac contractions were a physiologic impossibility on account of empty auricles and ventricles, and pulsations ceased. Twenty-four ounces of warm sterile normal salt solution were introduced by gravity through a trocar attached to a tube and funnel, the trocar being introdued into the median basilic vein. The result was magical. The heart resumed its activity, the patient rallied, and, notwithstanding the profound vital depression, made a satisfactory recovery. I commend this practice as of the highest importance in dangerous syncope from hemorrhage, from whatever cause, as more efficient than any other single measure. Combine with it proper stimulation and the Trendel-

enburg position and the patient is placed in the most favorable condition for prompt and effective reaction.

The mortality in secondary appears to be larger than in primary ruptures. This is altogether rational. The greater the size of the placenta the larger the area of highly vascular tissues there is to bleed when disturbed.

The history of the following case portrays with singular fidelity the danger of such an event:

During July, 1895, I saw a patient of Dr. Crawford D. Beasley, a multipara, aged about thirty-five, of French parentage, who a week or ten days previously had suffered violent pelvic pain, a large vaginal hemorrhage, attended with great vital depression, and was yet confined to the bed. There had also preceded this attack discharges of grumous blood from the vagina. I found a small mass in the right broad ligament which I diagnosticated as the sac of a ruptured tubal pregnancy. Twice subsequently, during August and early in September, I examined her at my office and was able to note the progressive enlargement of the mass. It was only movable as the broad ligament was pushed upward. The uterus was crowded to the left of the median line, and was well forward under the pubic arch. I desired her to enter my service at the Bushwick Hospital for immediate operation, having pointed out to her the imminent risk involved in its rupture. She appeared entirely oblivious to the danger of her condition and declined operation. A few days later Dr. Beasley was called hurriedly to see his patient. She expired just after his arrival, and an autopsy revealed a peritoneal cavity distended with blood, and a slit one-half inch long on the upper aspect of the right broad ligament, marking the point of secondary rupture and place of bleeding. The fetus was above the placenta. Doubtless a life was sacrificed which might have been saved.

Secondary rupture of the intraperitoneal sac may occur at any period, and the later the date, the larger the placenta, the greater the danger from fatal hemorrhage. Up to the fourth month the size of the placenta is not so large but that the risk of operation is not very great, though not without danger. That its removal should be undertaken is within the limits of conservative surgery. The same principle applies here as in the other operation.

The removal of the contents of the sac is not only permissible but mandatory. The hemorrhage may be controlled by packing the sac with gauze, provided the sac is removable. After packing, the end of the gauze should be placed in the vagina, if

possible. Sometimes the sac may be obliterated by buried sutures.

The method so ably advocated by an eminent member of this Society, Dr. Skene, of destroying embryonic life by electricity, is one I have never employed and cannot, from the experimental standpoint, speak of its utility. As compared with early removal it is always to be remembered that a dead ovum wheresoever lodged is a foreign body, and liable to produce sepsis.

Finally, it will be seen that the proper treatment of tubal pregnancy and its complications during the first four months of pregnancy is principally operative, and the safety of the patient rests largely in the correct diagnosis, courage, and skill of the attendant.

DISCUSSION.

The President: The gentleman who will be asked to open the discussion is well known to all of us by reputation, and it is with great pleasure that we are enabled to come into personal contact with him. I will introduce Dr. Edward J. Ill of Newark.

Dr. Ill: Mr. President and Gentlemen, it has given me great pleasure to listen to this paper of my friend Dr. Chase, and the subject, about which so much has been written, is by no means finished; there is a great deal more to learn There is a great deal to learn especially as to the cause of the rupture. I do not think that the causes that have been cited in the journals and books cover the ground entirely. In an experience of about sixty cases that I have seen I have many a time thought that it was not the growth of the ovum that produced the rupture, but rather the contractions upon the ovum causing a separation of the chorion and thus a hemorrhage into the chorion tissue, which continued until rupture took place. At the same time, the rupture would not take place if the muscles, the circular and longitudinal muscles, would continue in their growth with the growth of the ovum. There is a change which takes place in this muscular tissue. Under the microscope it will be found that the muscular tissue has become fatty at the point where the greatest distension has taken place.

The diagnosis is frequently very easy; at times there is a good deal of difficulty connected with it. Given a patient who has a sudden attack of pain, a flow of blood, syncope, and no fever—no rise of temperature—I think it will usually be one of ruptured tubal pregnancy. The diagnosis previous to rupture must be an exceedingly difficult one, mainly for the reason that the cases do

not come into our hands, and if they did it would be very difficult to diagnose it from any other tubal swelling. Out of all this number of cases that I have seen, I have been able to make a diagnosis but once previous to rupture. This case happened to be one which was under my treatment at the time she became pregnant, and I could observe from day to day the enlargement of this tube. I did not have the courage of my conviction, however, to open her abdomen and remove it. She had been treated for salpingitis, and here was this collection. She missed her period; she had never been pregnant before, and I suspected a tubal pregnancy. I carefully kept her home, kept a nurse in the house, and upon the first symptoms I operated.

Are there any cases where it is safe not to operate? This is a question which I think has received very little attention. The French say that every case of tubal pregnancy or ectopic pregnancy should be treated as a malignant disease would and must be eradicated. Somewhere I have seen the statement that about forty per cent. get well without any operation and remain well afterward. I have tried during the past years to differentiate between those cases where operation was absolutely imperative, where I considered it beyond a question of doubt, and those cases which might have a chance to go without operation. Not that I am afraid of the operation—rather the other way—I would rather do it; it probably gives me less care. But now and then we feel that we could learn if an operation could be avoided. From the 1st of September, 1896, to the 1st of July, 1897, I have seen seventeen ectopic pregnancies. Fourteen were operated upon; three I did not operate upon, and for these reasons: The women had had the symptoms as enumerated by Dr. Chase—they had acute pain, had syncope to some extent, they had a flow and a discharge of blood from the uterus. All three had passed the decidua. I saw them between ten and fourteen days after the onset of the disease. The clot was well formed; pain had ceased; there was no temperature; the women were in good surroundings and in good circumstances, and could well afford to be sick. A nurse was put into the house with them, and instructions were given so that should any untoward accident occur an operation could be done without hesitation. These three patients are well to-day. The blood-clot is absorbed, and it would take a very shrewd man to find that there had been any difficulty there. I understand that it is a serious risk to take. If the hemorrhage into the chorion—into the tube—continues, you may have a serious hemorrhage into the peri-

toneal cavity and your patient may lose her life. But of the other fourteen cases that I have operated on, one died. Severe secondary hemorrhages had occurred from slipping of a catgut ligature. I operate in the middle of shock, when the shock had reached such an extent that the pulse was just perceptible. I do not think I want to operate beyond that. I do not think I want to operate on a patient who has no longer got a pulse. I think her chances are better to let her go until reaction has set in. I do not think that I want to inject a salt-water solution into a patient's veins at that time for fear of increasing the hemorrhage, as you certainly will. In that sort of a case the raising of the foot of the bed will probably be of greater benefit.

Dr. Chase has remarked about the drainage of these cases, especially the drainage in the vagina. I do not like drainage in the vagina in these cases. If I have a case of secondary rupture where the rupture has first taken place into the broad ligament and then into the abdominal cavity, I should rather open the tear widely and remove all the clots and catch up any bleeding points, tying the ovarian artery which supplies that portion, tying the uterine end of the tube, and then stitch up the opening properly. You are very safe in doing that. There is not much chance of secondary hemorrhage after ligating the ovarian artery. That leads me to the point which Dr. Chase has spoken about, of hemorrhage at the fourth month or so. Later this may become a more difficult matter. I have never had any difficulty in removing the placenta in the former cases, provided I found the ovarian artery. You must not forget that the tube is supplied by that artery and that no supply of blood comes from anywhere else in tubal pregnancies. It is true you have anastomosis from the uterine, but we always ligate that. An important point is the saving of as much tissue as possible in these operations. You do not have a septic operation to deal with; the tube is usually in pretty fair shape at the uterine end of the rupture. I never cut off all the tube, if I have to cut it at all. I never remove the ovary on that side unless it is badly diseased. I would rather leave the ovary there. The ligature which encircles the tube is rarely put on so tight as to destroy the mucous membrane of the tube, and consequently you may have a patent tube and pregnancy follow afterward. I have actually had such an experience as that.

Dr. A. J. C. Skene: This subject has been under observation and investigation for a comparatively short time. What we know about extra-uterine gestation to-day and what we knew ten

or fifteen years ago, is really very surprising by contrast; and yet we are not all definitely agreed about any part of the whole subject. I thought that we were about a unit on the question of one item in causation, namely, some diseased condition of the Fallopian tube. Dr. Chase has upset all that by introducing evidence to the contrary. Now, it may be that it is possible and even probable for tubal gestation to take place when the tube is normal, but with the presence of some pathological condition in the uterus, but I am not willing to believe that tubal gestation is likely to take place if the sexual organs are entirely normal; and I believe that is about what Dr. Chase hinted at in his reference to causation this evening. It may be that the uterus and tubes are normal, with the exception of the condition referred to and discovered and described by Williams of Baltimore, who said that there were certain diverticula downward into which the ovum might drop and remain there and become impregnated and develop. Under those circumstances I can imagine that those having healthy sexual organs might be subject to this ectopic gestation. But more important subjects have been introduced by the paper of Dr. Chase and I shall hasten to refer to them.

I believe we all agree with the Doctor in what he said regarding the clinical history or symptomatology, the physical signs, the difficulties of diagnosis, and yet it seems to me that the greatest difficulty in diagnosis arises from the fact that we fail in many cases to have an opportunity to investigate cases until rupture has taken place; and then to determine, when the patient is in this condition, immediately after rupture, the true pathological conditions, is not by any means easy—it is exceedingly difficult. I think, however, that we can trust or hope in a reasonable way to make the diagnosis in the majority of cases, with one exception, if we have an opportunity to get the clinical history and watch the cases for a time and make a physical exploration. I believe the greatest difficulty in differentiation occurs between tubal gestation and gestation in a uterus bicornis or a uterus unicornis. That whole subject was thoroughly investigated, described, and discussed by the late Angus McDonald of Edinburgh. About the time he gave us his views and observations on the subject I had some cases under observation that enabled me to follow him with some accuracy, and from that time to this I have always believed that this is the most difficult condition to differentiate.

With reference to the subject of treatment as discussed by Dr. Chase in his paper, so far as he has taken up the subject I am

sure that we all agree. I wish that he had said a little more about the question of the treatment of those cases before rupture. He referred to treatment by electricity. I think that that perhaps is falling into disuse a little more now than formerly. So far as I am concerned I place less dependence upon it, and yet I believe that surgical treatment is indicated before rupture, and if we make an accurate diagnosis and operate with ordinary care, almost all of those cases could be saved. But of course in this connection we run against certain ethical ideas that make us hesitate before we practice abdominal section and removal of the tube and ovum. Your are all aware that there are objections on the part of some to operating, either by the use of electricity, or by abdominal section, because it is claimed that we have no right to sacrifice the life of an embryo under any conditions whatsoever. I had a curious experience in Montreal a short time ago. When I heard that question discussed I raised the question by saying: "Most of you in Montreal object to sacrificing the embryo to save the mother, either by electricity or by surgical operation. How do you get around that; do you allow your patients to go on to rupture and then operate, and allow them to run the risk of dying?" One replied, "The practical way out of that is, that the French women who are the subjects of extra-uterine gestation go to the doctors who will operate, and so they are about as well managed in Montreal as anywhere else." There is a little false reasoning I think on the part of the authorities with reference to this question of sacrificing the embryo. If we are debarred or prevented from destroying the embryo by electricity previous to rupture, or from operating and removing the embryo and the tube previous to rupture, the same reasoning holds good after rupture, because we never can tell but that many embryos may live after rupture. You know that our cases go on sometimes after rupture to full development, and so if we are guided by the rules referred to we should never operate, because we are never sure that the case may not go on to full time after rupture. By and by, perhaps, we will come more to the treatment of cases before rupture, when we make a diagnosis. Now, if we have the opportunity to examine a case, and it is a question of doubt as to its being a tubal gestation, or something else, we would be justified,—in view of the gravity of the affection and the fatality which follows rupture, unless operated upon promptly—I believe, in making an exploratory operation and removing the tube and ovum. I think if we have not arrived at that decided opinion with reference to treatment, we

are certainly heading in that direction, and will soon get there. Some of us, I presume, have pretty well settled that in our own minds; and we would suggest at once this operative procedure, with the understanding that it was entirely in keeping with the views of our patient in charge; or, if the patient objected, like the one referred to by Dr. Chase, of course, then our duty would be to retire and leave the patient in the hands of some one who would be guided by her wishes on the subject and her ideas of right and wrong.

With reference to the main point at issue, and that is the question of surgical treatment after rupture, I am quite well satisfied that it is a mistaken idea to limit ourselves to one method of operating in all cases. No reference has been made, as far as I noticed, regarding the treatment of the different conditions. Now, it certainly is necessary to make a marked difference in our operating, according to whether the case is one of peritoneal rupture, or subperitoneal—whether the gestation is subperitoneal or intraperitoneal. I am quite confident that many are agreed on one point, and that is that after rupture if we operate at all in cases where the rupture has been into the peritoneal cavity, the abdominal section is the proper method of treating those cases. If we operate promptly and the case is not advanced too far, I believe it is always possible to obtain a good pedicle, to remove the ovary and tube and the whole fruit-sac or gestation sac, as completely as we can in a case of pyosalpinx or hydrosalpinx, and there is no trouble with secondary hemorrhage, and no necessity for downward or upward draining either, as a rule. And those cases, I believe, are very satisfactory when the surgeon has an opportunity to operate early; that is, soon after rupture, before the patient is exhausted. But it is entirely another question when the rupture has taken place into the broad ligament and the ovum has become entirely subperitoneal. While I am quite positive that the leading authorities are all agreed about the management of those intraperitoneal cases when seen while in proper condition to operate, there is still a decided difference in opinion as to how we should manage those subperitoneal cases. Now, many believe that they should be let alone, and I am one of them provided there is no complication. When we are confident, from the fact that the tumor is in the pelvis, that the hemorrhage has been arrested by pressure coming from the exhausted elasticity of the broad ligament, and there is no evidence that any secondary rupture into the peritoneal cavity has taken place, I believe

that it is by far the safest method to wait and watch and see what may take place. Now, two things will happen surely; either the ovum will go on in its development and secondary rupture may take place, and it may be transformed into an abdominal gestation, as it used to be called in the old classification, or else the ovum will die at the time of rupture or subsequently, and then be absorbed in part, or go on to suppuration and to sepsis, and so on. Now, while I believe that we should wait until we see what happens, if secondary rupture takes place and the patient's life is placed in danger, as it may or may not be, then I think that the abdomen should be opened and the bleeding point of the secondary rupture found and controlled. Question, as to whether we should evacuate the sac in the broad ligament at the same time or not? If we do, there is very great danger in case the ovum is still alive, because we encounter a living placenta which is not by any means easily removed, and contrary to our learned friend from Newark, in those subperitoneal cases, it is well-nigh impossible to control all the bleeding. You may tie the ovarian artery, and yet that placenta has developed circulation for itself—venous, very largely—and if you try to separate and remove it you will have bleeding that you cannot control except by packing, and then it is very doubtful whether you can. Question, then, whether we should not in those cases open the sac and remove the fetus, if there is one on hand, and leave the placenta, closing the wound and trusting that the placenta will be taken care of; or, stitch the sac to the abdominal wound, and pack and drain? That is a question that is not definitely answered. I do not think that the results in that operation have been altogether satisfactory. Then, again, comes up the question, why not operate by the vagina? And that leads me to the fashionable fad of the day.

At the meeting of the American Rhinological Society, one of the members from the West said that he was surprised when he came to New York to find that all of the rhinologists in New York were running at the nose. If this keen observer looked beyond his own specialty he would have seen that the gynecologists of the present day were operating through the vagina so far as removing everything that is movable or immovable in that way, and consequently tubal gestation is no exception. We have been told by many within the last year or two that all cases that are subperitoneal, and some intraperitoneal cases, should be attacked by the vagina; in fact, at once, as soon as we have made our diagnosis. Now, that is undoubtedly the best operation to elect if you wait

long enough for the fetus to die, and the circulation in the placenta or the decidua to subside; it is safe to open the sac by the vagina, especially if it is done by the cautery, and evacuate the sac and drain. In all cases of suppuration, and even before that takes place, when we are satisfied from the shrinking of the tumor that the ovum is dead, and dead for some time, I believe that is the most satisfactory way of operating; infinitely safer and just as sure in its results as to open the abdomen; indeed, I think very much more so. That operation, you remember, was done quite a number of years ago by Dr. Thomas, and there have been no improvements on his method since then. He made a good selection of a case for that sort of operation, for it was one in which there was suppuration, and the result, of course, was excellent. He has operated since in the same way, I understand, with excellent results. But, while that is the method of surgical treatment that is best adapted to that one condition, it is, I believe, the most dangerous if the operation is undertaken while the embryo is alive or only recently dead; and still I have heard the operation advocated very strongly in all conditions, and especially very recently. I am sure, however, that it is exceedingly dangerous. It is almost impossible to open the vagina and into this gestation-sac without starting up a hemorrhage that cannot be controlled. I have had one experience of the kind where the conditions were like this: the placenta evidently was lowermost, the fetus uppermost. In my incision, made with all the care possible and with the cautery, I opened right into the placenta, and I had to tear the placenta to get at the fetus and to remove it, and the result was a hemorrhage which I could not control. Some of my friends have said since, "Why didn't you do hysterectomy and then you could control everything?" My patient would have been dead before I had half completed the operation of hysterectomy. I tried to seize the ovarian artery and uterine artery and I put on any number of forceps, and in spite of that there was that terrific oozing—not jetting, but oozing—which I could not control; by packing we controlled it to some extent, but in removing the packing the hemorrhage started again—though perhaps I removed it at a time when it should have been left—and the result was fatal.

I find I am deviating from the modern method of giving clinical records, I should have omitted to mention my fatal results and only given you my successes, but perhaps one will do you as much good as the other, and will do me no harm in the long

run. I believe then in these cases it is a most dangerous operation and it is much safer to do abdominal section. Many of these cases are lost in that way, by opening the broad ligament and evacuating the sac and trying to control the bleeding by packing, for although thorough drainage has been established by packing, it is not always successful. That leads me, then, to believe that it is by far the wisest course to pursue to operate promptly if the rupture is intraperitoneal, as soon as you possibly can; the sooner the better; the sooner the safer; but, in case it is into the broad ligament and the case becomes subperitoneal, that it is infinitely better and wiser to wait and see if the embryo dies, and if it dies, then to remove the contents by the vagina, which can be done after the circulation has subsided and shrinkage taken place; or, in case it goes on developing, that it is infinitely better to operate after the method of Dr. D. Berry Hart of Edinburgh, which is done in this way: He makes his diagnosis, if he can, by physical exploration and the history of the case. If he is still in doubt, and in grave doubt, he makes a median incision and completes the diagnosis by touch and inspection, and then closes his median-line wound and makes his incision in the side, lifts up the peritoneum, does not wound it at all, opens into the sac, which is very easy to do, and removes the fetus and allows the placenta to remain, and packs with gauze so as to stop any little oozing that there may be. There is usually very little bleeding, if any, but for the purpose of keeping the wound open he packs with gauze and then allows the placenta to die, and drains and packs for a week or so, when he finds that the placenta becomes separated and he can wash it away or remove it with forceps without exciting any hemorrhage. He then continues packing for a few days more, and then allows his wound to heal. That is to my mind the most rational way of dealing with those cases when the embryo is still alive and where there is likely to occur a secondary hemorrhage or rupture, but where it has not yet taken place. He has had now five cases of successful operation in that way, and none of them has given the slightest trouble.

Now, if we adopt those methods and adapt our methods of operating to the conditions present—and I think we can always distinguish between intraperitoneal rupture and the subperitoneal —I thing that by electing to wait in the one case and operating by the vagina when the time comes, or waiting and operating after the manner of Dr. Hart, or doing what has been so well done by many, including our learned neighbor from Newark, Dr.

Ill, the highest kind of success may be allowed. As the matter is formulated in my own mind now, that is the way that those cases should be treated from the standpoint of the surgeon.

There are many other points that I might refer to, but I am afraid I have taken more time now than rightly belongs to me. You will permit me to say in conclusion that I am sure we have but one opinion regarding the remarks of Dr. Ill. He said the subject was not very well understood. I thought he understood it remarkably well, and all he said was valuable and to the point, and we are all indebted to him, and offer our sincere thanks to him.

Dr. J. W. Hyde: Mr. President, I do not intend to discuss the pathology or even the operative treatment of these cases. There has been so much written and so much discussion on this subject in the last decade that it is almost a work of supererogation for any one to advance new ideas.

We are always reminded of the absolute necessity of being able to make an early diagnosis in these cases. How difficult that is, is demonstrated when a very large proportion of these women, whom we see with an ectopic gestation, are never themselves aware that they are pregnant, or that there is any difficulty besetting them until the very gravest of difficulties has already overtaken them. Women, as a general rule, will not consult a physician for every ache or pain they have of an abdominal character; and there is a natural modesty which keeps them from presenting themselves either in clinics or at our offices, and so it happens, as I say, that a very large proportion of these cases are never seen by the surgeon until alarming conditions are already present. Of the cases that do present themselves there is the the greatest difficulty oftentimes in making a diagnosis prior to rupture. I know of an instance where a very eminent gynecologist supposed that he had discovered an enlarged, diseased, and prolapsed ovary, and opened the posterior cul-de-sac to remove it. He was greatly chagrined to find the error in his diagnosis, and that he had an unruptured ectopic gestation with which to deal. This case was one which was witnessed and examined by other eminent surgeons, also, and his diagnosis was concurred in.

I know, also, of an instance of a woman, who had had several attacks of localized pelvic peritonitis, accompanied with a very thoroughly agglutinated condition of her abdominal viscera, who consulted her physician regarding pain and some disturbance in the inguinal region. He had knowledge of her previous attacks

and, while realizing the seriousness of the present attack, thought that it might be no more grave than her previous attacks. He sent her home, and calling later, found that this mass had considerably enlarged, and that there was a large area of dulness on percussion. He placed her in bed and used all the necessary precautions, and calling again shortly, found that the abdomen was so greatly distended as to call for immediate operative procedure. He found on opening, a broad, thick mass of coagulated blood which had slowly worked its way out of a pin-hole rupture in the broad ligament little by little into the abdominal cavity. This case had not presented one single feature of the ordinary clinical history of these cases of ruptured tubal pregnancy. There had been no shock; there had been no intensity of pain at any time, and the loss of blood had been so slight and so slow at each attack as not to give her or her physician any serious alarm at first. This shows how difficult it is sometimes to diagnose these cases even after rupture. But after rupture has taken place, as an ordinary rule, the diagnosis is more easily made than before. Before rupture, colicky pains in either inguinal region, taken in connection with other symptoms of pregnancy, are of suspicious character. So are any masses in either inguinal region, found on bimanual palpation, especially if they are accompanied by tenderness on pressure. We have these cases come to us more frequently now; we see more of them because we know more about them; we know more about the character of the lesion and how to treat it. I do not think it is good policy when one's patient is suffering from shock, from repeated hemorrhage taking place, to wait until she is absolutely moribund before undertaking to relieve. I think we should attack that hemorrhage just the same as hemorrhage from any other large blood-vessel in the body, and not wait for the hemorrhage to stop itself.

I do not wish to prolong the discussion, but to thank Dr. Chase for bringing up his paper before a regular meeting of the County Medical Society.

I have no further remarks to make, Mr. President.

Dr. Charles Jewett: Mr. President, the hour is so late and the ground has been so well covered that I will refer only to a few points, suggested in listening to the reading of the paper and the discussion.

First, with reference to diagnosis. We may make three classes of cases: Cases in which the tube has not yet ruptured; cases in which the tube has ruptured and more or less hemorrhage

has taken place; cases of hematoma or hematosalpinx, the result of an old rupture. The first class, as has been stated, very rarely present for diagnosis. When they do, the diagnosis should be made with little difficulty. In the second class, if the rupture is attended with much hemorrhage, the diagnosis ought to be made in practically every case. When the hemorrhage is small it is by no means an easy matter The symptomatology in the second class of cases differs greatly. There is no pathognomonic sign of a ruptured tubal pregnancy. Pain is usually atrocious and this is generally mentioned as one of the important symptoms. Yet it is sometimes almost entirely absent from the history. Genital hemorrhage, too, is a fairly constant sign, present especially at the time of rupture; yet cases are seen in which it is insignificant or wholly absent. I recall a case in which there was no history of hemorrhage and only a drop or two came away on the examining finger, yet the right horn of the uterus had ruptured from an interstitial pregnancy and there was a large quantity of blood in the abdomen. Collapse and pallor are frequently absent. Sometimes they are inconspicuous even after considerable internal hemorrhage. The most reliable signs are perhaps irregular hemorrhage and abrupt pain with faintness; abrupt pain, followed by faintness or collapse, is very significant of a ruptured tubal pregnancy in a patient who is exposed to pregnancy. An irregular bloody flow should excite suspicion in a woman whose menstrual habit has been normal.

The nature and origin of the third class of cases can seldom be decided before operation. Much, however, depends on the history.

With reference to the physical examination, I do not believe it is possible to recognize free fluid blood in the peritoneum by the vaginal touch. A clot imprisoned in the broad ligament, or encysted in the peritoneum, is easily made out. The remark was made that the tumor which was present before intraperitoneal rupture, disappears afterward. That is a misleading statement. A tumor very frequently remains. There is sometimes enough blood-clot left in the tube to present a very distinct mass, and a tubal pregnancy which has ruptured into the peritoneum may be mistaken for an intraligamentous one.

As regards temperature, it was stated that these patients have a normal or subnormal temperature. In most cases that I have seen there has been a rise of two or three degrees within a day or two after intraperitoneal rupture. This is due, I assume, to the

peritonitis which follows the escape of much blood into the peritoneum.

As to treatment, I think we might almost resolve all cases of ectopic pregnancy into two classes: one, those in which the product of conception is still living, the other in which it is dead. In the first class I would operate in all, in the last only for cause. I am disposed to agree with those who look upon a living tubal pregnancy as a malignant condition. It is very true that a considerable proportion of patients recover without interference, yet we can never tell in advance whether a given case of living ectopic pregnancy will get well without operation.

After an extraperitoneal rupture, the product of conception being dead, no one would think of operating so long as there are no indications of sepsis, present or imminent, no probability of dangerous hemorrhage, and no pain or injurious pressure-effects. In exceptional instances an intraperitoneal rupture in which the blood loss is small and has evidently been arrested can be trusted without interference. I have seen absorption occur in an extraperitoneal blood-tumor large enough to reach half way to the umbilicus. In the presence of sepsis, or of much pelvic pain, operation is demanded.

With reference to the method of operating: Generally the abdominal route is best. The vaginal route, however, has some claims to attention. A subperitoneal accumulation of septic blood can be reached more safely through the vagina. The operation is as simple as opening an abscess. In such a case the vaginal is easier, quicker, and safer than abdominal section.

Even a living pregnancy in the broad ligament, or encysted in the pelvic peritoneum, can in the early months be safely managed by the lower route. I grant the upper route is generally better. I removed to-day by the vagina what I believe to be a tubal fruit-sac, and had no difficulty in securing the vessels. Three or four days ago I operated from below in a case in which I supposed the ovum to be dead. I would not have chosen the lower route had I known the embryo was living. A three-months' fetus was removed measuring four inches in length, and weighing one ounce—corresponding to three-months' development. The fetal heart was still beating. The tube had ruptured into Douglas' cul-de-sac, where the embryo was found. The placenta still retained the greater part of its primary attachment. The cul-de-sac had probably become roofed over before rupture took place. The adhesions were so dense that the ruptured tube could not be

easily brought down for tying off the fruit-sac. The cavity was, therefore, packed with gauze, the abdomen opened, and the operation completed in the usual way. The loss of blood by the vagina was insignificant. The patient has done perfectly well.

In vaginal operations by the anterior route, as, for example, in Goff's method of shortening the round ligaments, the fundus is easily brought down and the tubes and ovaries are reached with great facility. This route would no doubt give easy access to a ruptured tubal pregnancy. I am not prepared to advocate it.

Dr. Skene has stated that the placenta should not be disturbed if the ovum is living. He alludes, I assume, to the later months. Yet the entire ovum has been removed in a number of such cases, notably by Shauta. He ties the ovarian artery outside and inside the tumor, and then, through a crescentic incision of the broad ligament, enucleates the whole product of conception. Doubtless the better course in the later months—which are not now under discussion, by the way—is to leave the placenta as Dr. Skene does, remove the redundant portion of the sac and close it up. The placenta can be removed by a later operation should it become necessary.

If the abdomen is left open, the sac sutured to the abdominal wound and the placenta left to slough away, it separates in about twelve days, but there is a long period of suppuration and no little risk of septicemia. I think it is better to close the abdomen and leave the placenta for future treatment should it require.

In the first three or four months, even though the fetus is living, the entire product of conception should, I think, be removed. Tying the ovarian artery on both sides of the tumor and tying the uterine artery, there can be no troublesome hemorrhage. If there were it could be controlled by mass ligatures.

Drainage, as has been stated, is not usually necessary. The necessity for completely cleansing the abdominal cavity is a question I would like to have heard discussed. The cleansing consumes time and does harm to the peritoneum, and it has always been a question in my mind whether it is necessary to remove all the blood. In the last case, just referred to, I used no irrigation, trusting to dry sponging—and no trouble has followed. As the temperature, however, was somewhat high, a vaginal gauze drain was used.

Dr. Chase: Mr. President and members of the Society: Owing to the lateness of the hour and the fact that there is another paper to be read, I will not occupy very much time in what I have to

say. The discussion has taken a broader scope than I had anticipated, as what I had to say in my paper referred to the diagnosis and treatment of tubal pregnancy—not ectopic gestation—within the first three or four months. Up to that time, as Dr. Jewett has mentioned, very many things can be done with safety which cannot be done with equal safety after that period, and those were questions which, on account of the breadth of the subject, I could not enter upon.

I am obliged to the gentlemen who discussed the paper, and especially to my friend Dr. Ill, not more for what they have said in approval than for the criticisms they have made upon it. I am conscious the paper did not go into details as it would have been desirable to have done, consequently, a good many things I would like to have said I did not say. A few points which have been brought out by the gentlemen I will, however, refer to, and first to the question of drainage. I take it, Mr. President, that there are but two conditions under which drainage would be required. One in which there was sepsis or suspected infection, and the other, in which we are not certain that the hemorrhage is thoroughly under control. Some provision should be made whereby the discharge of clots and of serous accumulations, or perhaps of pus, may take place, and to my mind there is obvious advantage, in the majority of cases, in downward drainage. If we are compelled to pack a fruit-sac present after secondary rupture into the peritoneal cavity or within the broad ligament, it may be desirable in some cases that we drain above, but I think in the majority of cases we will find it not only convenient but advantageous that our drainage should be into the vagina.

It is wise to make the distinction in operating in these cases if possible, whether the fetus is alive or dead. Sometimes we shall be able to make the distinction, and in other cases it is not so easy a matter. Doubtless, one method of treatment is applicable to cases seen immediately subsequent to rupture, and another method of treatment should be furnished in cases seen at a later date. In the presence of exhausting hemorrhage which has taken place after primary rupture, with the patient weak and suffering from profound shock, it is not usually an easy matter to foretell the danger-line. It is in my judgment the plain duty of the surgeon to take such steps as are needed to prevent further hemorrhage. The mortality of these cases is so great and the doubt exists as to whether the hemorrhage will cease spontaneously, so

that I believe the least risk to the patient is to have the operation done at once, at least as soon as the circumstances will admit.

Dr. Skene raises an interesting question; that is, our obligation to the ovum, regarding its preservation. While I regret to differ with so eminent authority, it seems to me that this is not a question which should long deter us from operation. I believe, sir, that the mother is entitled to every consideration, and that the ovum is entitled to very little. It is highly improbable in a given case of rupture of a tube that the development of the fetus will go to term and the child be saved, and if it is, we know what the character of these children usually is. It seems to me our duty is to the mother, and to the mother practically exclusively. Now, if a case comes under observation, whether it be intraperitoneal or subperitoneal, at a period somewhat subsequent to the date of rupture, and there is no present evidence of hemorrhage, and there is doubt in our mind whether the ovum is alive or not, I entirely coincide with Dr. Jewett's views, I think we may be justified in waiting for a time and watching development to see whether we find an evidence of increase in the size of the mass, or whether it is shrinking; but if there is progressive development, no delay should be had in operating during the early months.

I am also in harmony with most of the remarks of Dr. Jewett regarding the methods of operating. I think it is perfectly evident that when we have a hematoma, a hematoma with what may be left of an unabsorbed ovum, which suppurates and breaks down, that we are justified not only in operating through the vagina, but that is altogether our best method. For myself, however, I shall not in any acute case operate by the vaginal route, fearing the difficulty of controlling hemorrhage beyond the range of vision. With a full appreciation of the risk immediately following primary rupture, what shall be said of the danger of secondary rupture, when the danger is more appalling. The outcome of the case to which I referred is sufficient commentary. I confess that we assume considerable responsibility when we say that we shall operate in such a case, but when we take into account the comparative immunity from risk in operation, *per se*, and refrain from operation and the patient loses her life, can we defend our inaction or justify our delay? To my mind, in case of rupture, of secondary rupture, whether within the peritoneal cavity or whether within the broad ligament, the risks of fatal hemorrhage are so great that we should consider the matter very carefully before we take the risk of leaving our patient to Nature.

PLASTIC OPERATION FOR SADDLE-NOSE.

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New York;
Assistant Surgeon, Methodist Episcopal Hospital.

The introduction of foreign bodies for prothetic purposes into the tissues, and the securing of the healing-in of the same, still remains a surgical procedure of unfixed utility. That this can be

Saddle-Nose Deformity before Operation.

accomplished has long since been demonstrated. The material best adapted to be used for this purpose, and the permanency of such operations are the questions yet to be settled.

An operation which I have performed for the relief of saddle-nose is as follows: An incision is begun at the mucocutaneous

junction about half way down the ala of the nose, and carried upward along the margin of the nostril, across the septum, and down on the opposite side to a corresponding point. This incision is made just within the nostril. The skin is then dissected up over the whole extent of the external nose. This dissection is carried on with a narrow knife and sharp-pointed scissors. The

Saddle-nose Deformity after Operation.

skin is thus dissected free from the alæ and the cartilaginous tip of the nose, and laterally out upon the superior maxillary bone and its nasal process to the canthi of the eyes, and above as far as the frontal bone. The chief bleeding comes from the vessels of the septum and the branches of the angular artery. This is controlled by twisting the bleeding points, by the application of pressure, and by packing the wound with hot compresses. This procedure, over so great an extent and through so narrow an opening, must needs be very tedious. Complete hemostasis hav-

ing been secured, a bridge of hard rubber is inserted, and the wound closed by a subcuticular suture of silk. Over the whole is then placed a dry compress, which is held in place by adhesive straps, and which is intended to make gentle pressure and act as a splint.

The patient upon whom I did this operation was a man, forty-two years of age, in the service of Dr. Pilcher in the Methodist Episcopal Hospital. He had suffered since childhood with an aggravated deformity of the nose, a sequel of scarlet fever. All that remained of the nose was the cartilaginous tip, which had also been retracted by the sinking in of the bridge of the nose, so that the nostrils looked upward more than normal. The bridge, the work of Dr. J. W. Russell, was made of hard rubber, concavo-convex in form. The two wings of this bridge were widely fenestrated, and when in place rested upon the nasal process and facial surface of the superior maxillary bone.

At the end of forty-eight hours all dressings were removed, and the suture line painted with collodion. The traumatic edema had almost disappeared by the end of ten days, and at the end of two weeks it had quite subsided. There was never any discharge from the wound. The subcuticular sutures were drawn out at the end of ten days. It is now twelve months since the operation, and the patient has suffered no irritation whatever from the presence of this bridge beneath the skin. The nose presents a normal appearance.

WILLIAM HENRY THAYER, M.D.

Dr. Thayer, President of the Medical Society of the County of Kings, 1872-73, died at his late home in Lanesboro, Mass., on December 22, 1897, at the advanced age of seventy-five. A biographical sketch is being prepared by the Historical Committee, which, together with his portrait, will be published in the JOURNAL.

EASTERN DISTRICT HOSPITAL.

Drs. J. O. Polak and R. H. Pomeroy have resigned from the staff of the Eastern District Hospital.

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Exchanges should be addressed: BROOKLYN MEDICAL JOURNAL, 356 Bridge Street, Brooklyn, N. Y.

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EDITORIAL.

POLHEMUS MEMORIAL CLINIC.

On the 28th and 29th of December, this institution was thrown open to the public for inspection, a privilege which was availed of by more than four thousand persons, in which number the medical profession was largely represented. The entire medical staff of the college, hospital, and dispensary acted as a reception committee under the efficient chairmanship of T. R. French, M. D. The expression of admiration for the structure was universal, and many familiar with edifices of a similar character, both in this country and abroad, pronounced it to be *facile princeps*. In the sentiments which were expressed by the visitors were many appreciative of the bounteous liberality of the donor, Mrs. Caroline H. Polhemus, of the unremitting attention to every detail in plan, construction, and equipment of her representative, Hon. William B. Davenport, and of the skill, ingenuity, and power of adapting architectural features to practical utility displayed by the architect, Mr. Marshall L. Emery. There was a unanimous agreement that such a building was a greater monument to perpetuate the memory of a benefactor than any mausoleum, even though it

should rival in its beauty and magnificence that erected by Artemisia at Halicarnassus.

In the erection of buildings such as the Polhemus Memorial Clinic there is always danger of attracting by the greater facilities for treatment those for whom it was not intended, thus increasing an evil which has grown to such proportions as to arouse the whole medical profession to seek means for its diminution, and, if possible, its extinction. May we, therefore, in calling attention to this danger express, on behalf of a united profession, the hope that this dispensary will be so wisely conducted as to continue to relieve for generations the worthy poor for whom it was erected, and that those responsible for its management will ally themselves with the profession in the movement which has already attained such impetus to exclude unworthy applicants. No greater tribute could be paid to it in the years to come than to say that, whatever may be said of other institutions, the Polhemus Memorial Clinic has contributed largely to the welfare of suffering humanity, but in so doing has never contributed to the pauperization of the people.

EZRA H. WILSON, M.D.

We congratulate the Hoagland Laboratory on its success in having obtained the undivided services of Dr. Wilson as its Director of Bacteriology. Although he has held this position for several years, he has at the same time been chief of the Bureau of Bacteriology of the Health Department. From this position he has resigned, and will in future devote himself to bacteriological research in the Laboratory, and to the instruction in that department of such physicians and students as may desire to avail themselves of the excellent opportunities which this institution affords. We think that the profession, as a whole, should participate in this congratulatory felicitation, for it is not too much to expect that from the researches of such an eminently qualified bacteriologist as Dr. Wilson, valuable contributions will be made to our bacteriological knowledge.

NEW YORK POLICE SURGEON EXAMINATION.

What is the explanation of the fact that while more than eighty of the New York physicians applied for the position of police surgeon in that city, only four obtained a percentage above 70, and

this, too, when the examination was upon medicine. surgery, physiology, materia medica, spelling, and letter-writing, while the general experience and standing of the applicants were also taken into consideration in the determination of the result?

In commenting on this examination our esteemed contemporary, the *New York Medical Record*, says: "The medical questions were fair ones, and the whole examination was conducted in a thoroughly business-like and straightforward manner." We have no reason to question the entire truthfulness of the above statement, but it does seem to us somewhat strange that only five per cent. of the applicants were competent to fill the position of police surgeon in the City of New York. We are familiar with the duties of that office, and have known a considerable number of men who have satisfactorily performed these duties, but we have never supposed that so small a proportion of the profession was equipped therefor. If everything is as it appears, then the profession of New York has reason to be anything but proud of its members, or at least of those who presented themselves for the test given these candidates; but we know better, and believe that there is some other explanation. Who can and will give it? A recent examination for the same position was held in Brooklyn, and we shall watch for the results with great interest.

PROGRESS IN MEDICINE.

PROPHYLAXIS.

BY CHARLES JEWETT, M.D., SC.D.

THE TREATMENT OF PUERPERAL INFECTION.

Dr. Jewett (*Am. Gyn. and Obstet. Jour.*, November, 1897): Practically all the causes of infection are within control and puerperal sepsis is a preventable disease.

Immunity depends chiefly on the cleanly conduct of the lying-in. Yet the responsibilities of the obstetrician in the prevention of sepsis are by no means confined to an aseptic technic. Conditions which predispose to septic infection should be recognized weeks before labor, and as far as possible controlled. Examples are: debility, anemia, syphilis, rheumatism, paludal poisoning, metallic impregnation, and toxemias of various forms. Park calls attention to the fact that retained excrementitious material is among the most active predisposing causes

of septic disease. "All the excrementitious products which arise from insufficient liver activity are capable of producing forms of intoxication. When some of the products of intestinal fermentation are absorbed more or less poisoning is sure to ensue. An aqueous extract of fecal matter is much more toxic than putrid matter. From these and other constantly menacing sources of self-intoxication man escapes by virtue of his intestinal, cutaneous, pulmonary, and renal emunctories. Especially important is the action of the kidneys. Auto-intoxication is practically impossible if the kidneys are working normally."

Active cultures of the infecting agents may be present in the lower part of the birth-canal or in adjacent pelvic viscera before labor.

The origin of puerperal fever is sometimes to be found in vesical, vaginal, or rectal disease existing before labor. The physician should be assured of the condition of these organs in the later weeks of gestation. Uncomplicated gonorrheal poisoning seldom gives rise to fatal forms of puerperal fever. Yet, a streptococcus is frequently associated with gonorrheal infection. A pathological vaginal secretion calls for treatment in advance of labor.

The importance of asepsis culminates at the labor. It is the opprobrium of general obstetric practice that its septic mortality in child-bed remains undiminished. Obstetricians of special training have practically no death-rate in private practice. Child-bearing should in all cases be surrounded with the precautions observed by the modern surgeon in capital operations.

In health the vagina, in the absence of unclean contact, is free from pathogenic organisms. Vaginal douching during or after labor in conditions of health is not only unnecessary but injurious. By diluting the vaginal secretion, by washing away and destroying the leucocytes, and by impairing the secretory activity of the vaginal wall, it interrupts for many hours the action of the natural protective agencies. *This applies in operative as well as in spontaneous deliveries.*

At no time is the liability to infection greater than in the first few hours after the expulsion of the child. At this period the wound surfaces are wholly unprotected against absorption, and the resistance of the tissues is at a minimum by reason of bruising and of local and general exhaustion. Manipulation within the passages at the close of labor is especially dangerous. The introduction of the hand into the uterus is a risk to be avoided if

possible. Even fragments of membrane which are wholly within the uterus are better left to be cast off spontaneously. While vaginal tears are best closed, the advantage of suturing the cervix at this time is extremely doubtful, unless compelled by hemorrhage.

CURATIVE TREATMENT.

Local Measures.—An essential preliminary to the local treatment is an accurate knowledge of the seat and character of the local lesions. A pelvic exploration should be made immediately there is reason to suspect the existence of infection. It is a grave mistake to curette and douche the uterus when the disease is confined to the parts below it.

Septic vaginal wounds are to be cleansed once or twice daily, and touched with tincture of iodin, or with a 50-per-cent. carbolic or chlorid-of-zinc solution. Lacerations extending into the broad ligament should be cleared of blood-clots and packed with iodoform gauze.

Vaginal douching is useful in the presence of foul discharges. To a mild non-toxic antiseptic there can be no objection, if properly used. The peroxid of hydrogen or a 1-in-10 Labarraque solution is suitable. Douches, however, ought to be given only by the physician, and with all the care observed in a major surgical operation.

No active interference within the uterus should be undertaken till assured that it is involved in the septic process. Tardy involution and an abnormally gaping cervix are presumptive evidence of a septic or putrid endometritis. The most definite information is afforded by the fingers in the uterus. It is difficult, however, to render the hand aseptic, to say nothing of the risk of carrying infectious material from the vagina. To the trained hand the dull curette is almost equally satisfactory as a means of exploration and is safer. The odor of the uterine lochia can be learned from what clings to the curette. The presence of decomposing blood-clots or of fragments of placenta or membranes calls for the immediate and complete evacuation of the cavity with the curette.

While the curette and the douche, rationally employed, are valuable resources in the treatment of puerperal septic endometritis, their empirical use as routine measures has doubtless done incalculable harm.

In the absence of débris in the uterine cavity the curette is contraindicated. In purely septic, as distinguished from sapre-

mic infection of the endometrium, painting the entire cavity of the uterus with tincture of iodin, or with a 50-per-cent. carbolic or iodized phenol solution is recommended. The uterus is first washed out by prolonged irrigation with a normal salt solution, or with a mild antiseptic—*e. g.*, iodin water. Finally, a loose packing of iodoform gauze is left in the cavity, to be removed in twenty-four hours.

In virulent forms of infection little or no benefit is to be derived from local measures. By the time the indication for treatment presents the offending germs have passed beyond the reach of curette and douche.

As bearing on the value of curettage and douching, the statistics of Pinard may be cited:

In the Maternité de Lariboisiere, '83–'89, and the Clinique Baudelocque, '89–'94, there were 63 septic deaths in 13,835 confinements.

Under the use of intra-uterine irrigation and curettage, separately or combined, the death-rate steadily fell to .79 per cent. in 1885, and to .27 per cent. in 1892, rising again to .42 per cent. in 1893.

In 1894 there were 123 cases of infection in 2139 women. Of 85 treated by irrigation all recovered. Of 38 cases in which curettage was practised 4 died.

Carossa of Bavaria places a soft drainage tube in the uterus, and about this as a center packs loosely with absorbent gauze. A rubber tube and funnel are attached to the drain, and every four hours about 8 ounces of 20-per-cent. to 25-per-cent. alcohol are slowly passed through the funnel.

Kahn reports excellent results in nine cases of puerperal endometritis treated with intra-uterine injections of steam. The uterus is first cleared of blood-clots and remnants of secundines. The steam is injected through a perforated metal tube. The tube is passed through a cannula, which serves as a guard to the vagina and vulva. Steam at a temperature of 100° C. is used for two minutes, when the temperature is raised to 115° C. and allowed to act for fifteen seconds. The steam is an effective germicide, the blood- and lymph-channels are effectually closed by albuminous coagulation and a protective coating is formed over the new granulation tissue.

Systemic Treatment.—General measures are indicated not only to combat the systemic effects of the poison, but to control the local septic process as well. Alcoholic stimulants, tonics, ali-

mentation, eliminants, and certain measures addressed directly to the microbic factors of the disease constitute the systemic treatment. Alcohol, to realize its best effects, should be pushed to the point of intoxication.

Tonics help to hinder waste and to promote oxidation of the toxins and the products of tissue disintegration. Most useful are strychnin and quinin, especially the former. Strychnin may be given in doses of 1–30 grain from three to six times daily, according to the degree of exhaustion and the tolerance of the patient. Quinin is of value in tonic doses of at most 3 or 4 grains every six to eight hours. In large antipyretic doses it is injurious by hindering oxidation. Spartein, caffein, and other similar agents are frequently of service in heart depression for maintaining the energy of the circulation.

Feeding must be limited to liquid foods, given in small quantities and often. Predigestion is often required.

Water drunk as freely as can be borne and abundance of pure air help to eliminate the disease poisons. Willischanin has shown by experiments on animals that the quantity of septic poison required to intoxicate is doubled or tripled when the animal drinks abundantly. Diuretic drugs and warm drinks for their diuretic effect may obviously be of service. The judicious employment of saline purgatives has a rational therapeutic basis as an eliminant.

To limit the diffusion of the poison from the primary focus in the uterus Bumm and Williams advocate the use of ergot.

Antipyretics.—The symptomatic treatment of fever is much abused. The coal-tar antipyretics are not only powerful depressants, but, as Robin declares, they hinder the elimination of the microbic poisons and the products of tissue disintegration by hindering their oxidation. Quinin in antipyretic doses acts in like manner. Cold bathing, on the other hand, if judiciously employed, has the effect of a nerve tonic; it increases oxidation and favors elimination. The liberal use of cool drinks is helpful for reducing temperature as well as by promoting disintoxication. Cold sponging is indicated when the temperature is 102° F. or higher. The circulation is maintained by friction and by warm applications to the extremities. In profound depression of the vital powers refrigerant measures are obviously contraindicated.

Inoculation experiments in the treatment of malignant growths recently reported by Petruschky throw grave doubt on

the value of antistreptococcic serum. One woman was inoculated with streptococci eleven times at intervals of one or two weeks. Typical erysipelas resulted every time, proving that no immunity had been established.

Nuclein has recently been brought to notice for the treatment of sepsis. It acts as a leucocytotic, and is believed to intensify the germicidal properties of the blood.

The dose employed is 30 minims of yeast nuclein (Parke, Davis & Co.) every four hours, given subcutaneously.

No important ill effects have been observed from the use of nuclein, and the favorable reports recently published by Courtney and others commend it to more extensive trial.

Lavage of the blood or the tissues by means of hypodermic injections of the normal salt solution, or of Hayem's solution (sodic chlorid, ʒ iss.; sodic sulphate, ʒ iiss.; water, Oii) is sometimes useful.

GYNECOLOGY.

BY WALTER B. CHASE, M.D.

INDICATIONS AND USE OF THE UTERINE SOUND.

Dr. Rosenwasser, in the *Atlantic Medical Weekly*, says:

a. To ascertain the degree of patency of the cervical canal; to explore the condition of the mucous lining of the cavity, and to measure the depth of the uterus.

Those who discard its use cannot point to a single symptom by which a stenosis can be demonstrated without sound or probe; nor can they help us discover the sensitiveness or hemorrhagic tendency of the mucous lining; nor can they adduce other means by which an accurate knowledge of the size and shrinkage of the womb in subinvolution can be obtained. Furthermore, they cannot assign any reason why the proper use of the sound should be especially calamitous when the similar use of like instruments in organs even more sensitive is conceded to be most appropriate and surgical.

b. To define the position of womb in the pelvis and the relation of the cervix to the body when these cannot be accurately established by the bimanual.

The sound will clear the doubt in the case of a fleshy woman through whose fat abdominal wall we think we feel the fundus or fail to feel it.

c. To induce early abortion. Experience has taught many of us how easily an unwitting use of the sound can bring on the discharge of an impregnated ovum. Following this cue I have used the sound within a few days after missed menstruation in cases where a possible pregnancy was deemed inadvisable or dangerous. The sound is introduced to the fundus and allowed to rest in the uterus one or two minutes to induce imperceptible contractions. A reintroduction after a few days will usually effect a safe discharge.

d. To assist in replacing some cases of retroversion.

Reposition can be effected in most cases by bimanual manipulation. A patient who is very nervous, or one whose abdominal wall is very thick, cannot thus be managed. The sound is here a valuable aid. It is introduced through the speculum and held in place by the right hand while the speculum is being removed over it with the left. The left index-finger is then placed into the posterior vault pushing the fundus upward and forward while the handle of the sound is being depressed. The vaginal finger thus guards against injury and facilitates the replacement.

I would not recommend the sound where of doubtful utility or where an anesthetic would better establish a diagnosis, or where the procedure might be attended with danger. For instance, in differentiating retroflexion from retro-uterine tumors, or uterine polypus from inversion; or in efforts to locate interstitial fibroid in either wall in the presence of a tortuous canal.

TUBERCULAR PERITONITIS.

In an article on this subject. Holmes arrives at the following conclusions (*Annals of Gynecology*):

1. Tubercular peritonitis is a relatively common disease.

2. It is never a primary disease, though it is usually impossible to find the initial focus.

3. Recovery follows laparotomy, as a general rule, unless there is an initial focus to keep up the disease.

4. This disease appears in three different forms—the exudative form, the dry form, and the ulcerative form, and they are recognizable in the order named.

5. Microscopical examination of the peritoneum is sufficient for a positive diagnosis. The demonstration of microscopical tubercles, or the recognition of the bacilli are only confirmatory.

6. Puncture of the abdominal wall for diagnosis or for the removal of ascites and injection of air, fluid, or iodoform, is dangerous and should not be practised.

7. Laparotomy, with iodoform-gauze tamponade drainage, is the safest and most reliable treatment.

8. Laparotomy should be done as soon as there is a show of emaciation or when a relative diagnosis has been made.

9. A positive diagnosis can never be made before laparotomy.

FLOODING AT PUBERTY.

Bécigneul (*Lancet*, Nov., 1897) reports a case of a girl of thirteen attacked with profuse uterine hemorrhage. The first period began with the usual phenomena, but the show lasted a fortnight, and after an interval of a week reappeared and continued for a fortnight, when Bécigneul was consulted. Rest, cold drinks, and ergotine were of no avail. The parts were explored, and the uterus and ovaries appeared to be thoroughly well developed. An intra-uterine injection of water at 113° F. at last stopped the flooding, which was becoming serious. Five days later the patient got up, the bleeding recurred, and an injection was thrown up into the uterus. The flooding ceased, but not so quickly as before. For a month the patient was kept in bed, and the injections were continued daily. Menstruation was afterward definitely established. This patient seems to have suffered from the idiopathic metrorrhagia occasionally seen in young subjects. Bécigneul found that she had no sign of hemophilia besides the bleeding, no cachexia of any kind, and no heart or liver complaint. She had never been attacked by any infectious disease; diabetes, albuminuria, and inherited syphilis were excluded, nor was there any evidence of poisonous diet. The uterus showed no sign of disease. The above negative history appears to be the rule in this flooding at puberty or "metrorrhagia of adolescence." Bécigneul admits that the theory of reflex irritation as a cause explains nothing.

DISEASES OF THE THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.

TURBINOTOMY.

This operation (*British Medical Journal*, November 13, 1897) was discussed thoroughly by the Section on Laryngology of the British Medical Association. Greville MacDonald, its president, defines the operation to be excision of the entire inferior turbinated body.

It has been performed for (1) relief of obstruction to respiration; (2) relief of neuroses; (3) relief of persistent catarrh.

The excessive hemorrhage which frequently occurs renders the procedure one of the gravest of nasal operations. MacDonald believes it an unwise operation and an excessive surgical procedure, because relief to the above conditions can be obtained by less radical methods, namely, removal of redundant soft tissue by scissors, snare, or knife, leaving the bone untouched. This conservative operation saves tissue, which is of physiological importance, whereas turbinotomy removes the main secreting gland or organ of the nose. It is probable that its absence may in after years cause chronic inflammation of the larynx. In support of this, experiments were cited of contracting the inferior turbinated tissue by a cocain solution and noting the effect upon the inspired air. It was found that while the temperature to which the inspired air was raised was not materially altered, the amount of water taken up by the air was diminished to one-half, and in some cases to one-third, of the usual amount. It may be asserted, therefore, that removal of the inferior turbinate will seriously lessen the quantity of nasal mucus secreted. As in anemic and atrophic diseases of the nasal mucous membrane we find pharyngitis sicca and chronic laryngitis, we may reasonably expect to have a similar condition following turbinotomy.

T. W. Carmalt Jones stated that the operation was first performed for the relief of tinnitus aurium in a case in which actual cauterization of the inferior turbinates had given only temporary respite. Turbinotomy gave a satisfactory result. Of 100 patients who had been "spokeshaved" for tinnitus, 60 had reported their present condition, and of these sixty per cent. claimed cures. The hearing also was improved. The passage of the Eustachian catheter was rendered possible, and treatment of the inner ear was more effective.

In some cases mouth-breathing, sneezing, and asthma had been stopped by resort to turbinotomy. Also, the sense of smell had improved and anemic tendency lessened, without the exhibition of iron, arsenic, or other drugs.

Hemorrhage was generally not excessive, but had in a few cases proved troublesome. Secondary hemorrhage, otalgia, and suppurative otitis media had occurred but rarely. No death had been attributed to the operation.

Dr. Bryson Delevan objected to turbinotomy as unwarranted by the conditions. It was unscientific to remove more tissue of the nose than absolutely necessary, and relief to the patient could be given by conservative surgery. More attention should be

directed to the septum, as its malformation was frequently the cause of the obstruction. The general health deserved careful investigation; rheumatism, gout, and digestive disorders may be the source of the hyperemia of the turbinated bodies.

THE FRONTO-ETHMOIDAL CELLS.

J. H. Bryan calls attention to these cells, which lie between the ethmoidal cells and the frontal sinus. They are from four to seven in number. They do not properly belong to either the frontal or ethmoidal sinus, nor do they communicate with them. The anterior cells are occasionally abnormally large and project into the frontal sinus, thereby diminishing its size. In suppuration of the large sinuses the cells are often involved. Operations for chronic empyema of the frontal sinus should include opening into these cells and establishment of free drainage, as they may be a source of re-infection.

The maxillary sinus, when inflamed, is generally diseased independently of the frontal and ethmoidal sinuses, but the inflammation may be the result of a secondary infection, for in some cases direct communication exists between the sinuses, and septic material can thus pass from the smaller cavities to the larger. This has been considered an anomaly, but the variation is not uncommon.

Dr. Fillibrown of Boston reports an examination of 22 heads, and in 20 found that the infundibulum extended as a half tube to the foramen of the maxillary sinus, instead of stopping in the middle meatus. Such a channel could convey pus flowing from the superior sinues directly into the antrum, and this is suggested as a possible explanation of the persistence of pus in the antrum after operation.

BROOKLYN NEUROLOGICAL SOCIETY.

At the annual meeting of the Brooklyn Neurological Society, A. C. Brush, M.D., was elected president, and W. H. Haynes, M.D., Secretary, for the ensuing year. Dr. Harmon Smith presented for Dr. Wm. Browning a case of Huntington's Chorea, which was examined and discussed by the members present.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

695th Regular Meeting, Tuesday, December 21, 1897.

The President, Dr. George McNaughton, in the Chair.

There were about seventy-five members present.

The minutes of the previous meeting were read and approved.

REPORT OF COUNCIL.

The Council reported favorably upon the following applications for membership:

Dr. Jno. Joseph Kindred, Louisville, '89.

Dr. Herman T. Peck, L. I. C. H., '96.

Dr. Chas. W. Berry, P. & S., N. Y., '96.

Dr. Laura M. L. Riegelmann, Women's Medical College, Baltimore.

Dr. Albert D. H. Heppner, L. I. C. H., '97.

Dr. John P. McQuillan, L. I. C. H., '95.

Dr. John H. O'Neil, N. Y. Univ., '94.

Dr. A. H. Schwab, P. & S., N. Y., '90.

Dr. Joseph P. Murphy, P. & S., N. Y., '94.

Dr. L. M. Maus, Univ. Md., '97.

Dr. George S. Kessler, N. Y. Univ., '97.

Dr. Florence S. Emerson, Wom. Medical College of N. Y. Infirmary.

Dr. Daniel C. Mangan, Univ. N. Y., '91.

APPLICATIONS FOR MEMBERSHIP.

Dr. James H. Andrew, 500 Madison street, Bellevue, N. Y., '96.; Dr. Frank C. Skinner, 104 Arlington avenue, Med. Chir., Phila., Pa., '94; Dr. Warren Schoonover, Jr., 115 E. 59th street, N. Y. City, Bellevue, '97. Proposed by Membership Committee.

Dr. Henry Hawkhurst, 380 Bainbridge street. Proposed by Drs. C. N. Cox and J. M. Winfield.

Dr. Edward E. Hicks, 921a Jefferson avenue, N. Y. Univ., '93. Proposed by Drs. G. McNaughton and D. Myerle.

Dr. Robert J. Bell, 285 Warren street, L. I. C. H., '87. Proposed by Drs. McNaughton and C. F. Barber.

ELECTION OF MEMBERS.

The following, having been regularly proposed and favorably acted upon by Council, were declared by the President elected to membership:

Dr. Frank J. S. Fitzgerald.
Dr. H. C. Anderson.
Dr. Otto G. Frischbier.
Dr. Albert D. H. Heppner.
Dr. Bernhard Stern.
Dr. Clarendon A. Foster.
Dr. Edward A. Hoffman.
Dr. Tenney H. Wheatley.
Dr. Geo. F. Little.

On motion of Dr. Myerle, duly seconded and carried, Dr. Martin Amador (187 Park avenue, N. Y. Univ., '78)—a former member of the Society who had been absent in South America for some years—was re-elected to membership.

The President stated that he had received a communication from Dr. Jacobus, President of the Medical Society of the County of New York, requesting that delegates be sent from this Society to confer with delegates from New York, Queens, and Richmond Counties, for the purpose of considering the formation of a new society—an advisory society for the new City of New York. The date fixed for such conference falling before the date of the present meeting of this Society, at the request of Council Drs. Charles Jewett, J. M. Winfield, Jos. H. Hunt, and G. McNaughton attended the conference where plans of organization were discussed and a committee appointed to draft by-laws.

On motion this action was duly endorsed.

SCIENTIFIC BUSINESS.

"Orchidectomy and Vasectomy for the Relief of Symptoms Arising from Hypertrophied Prostate, with Report of Cases." By Dr. J. M. Winfield.

Discussed by Drs. Pilcher, Henry Wallace, J. D. Sullivan, Morton, Bristow, and closed by Dr. Winfield.

"The Centrifuge as an Aid to Diagnosis, with a Demonstration of the Hematokrit and the Apparatus for Milk, Sputum, and Urine Analysis." By Dr. Henry P. de Forest.

Dr. Myerle stated that a bill to regulate the practice of midwifery in the State of New York, drawn by a committee appointed by the Society of Medical Jurisprudence, was to be presented as an amendment to Public Health Law, Chap. XXV., General Laws of 1893. He gave a synopsis of the bill and then moved that the matter be referred to the Committee on Legislation of this Society. Seconded and carried.

REPORTS OF COMMITTEES.

Dr. Evans, on behalf of the committee representing this Society in the Joint Conference in reference to the dispensary abuse, reported that to take the place of the former bill which was vetoed by the Governor, a new bill had been drafted and considered by the Joint Conference and had been approved by a majority of the medical societies of New York and Brooklyn. The new bill concerns dispensaries alone, and the power to revoke the charter of any institution violating the provisions of the bill is not conferred by it on the State Board of Charities, as in the old bill.

Dr. Evans moved that the bill be approved by this Society.

Some discussion followed, and on motion duly seconded, the said bill was approved and the sub-committee authorized to so report to the Joint Conference.

Dr. Evans also presented the following resolution, which was recommended by the Joint Conference for adoption by each of the several societies therein represented, *viz.:*

"RESOLVED, that it is degrading to the professional standing of physicians and adverse to the best interests of the profession to treat patients associated in societies or lodges for less than Five Dollars each per year."

Dr. Evans moved the adoption of this resolution.

After discussion, on motion duly seconded, the resolution was laid on the table.

Dr. Evans stated that it was the desire of the Joint Conference that the several sub-committees constituting it should be continued for the further prosecution of the work in hand, and he, therefore, moved that the committee from this Society be continued in office accordingly. Seconded and carried.

Dr. J. E. Sheppard moved that the Legislative Committee of the State Medical Society be notified that the new dispensary bill had been endorsed by this Society, with the request that that Committee use their efforts toward the passage of the bill by the Legislature. Seconded and carried.

NOMINATIONS OF OFFICERS AND DELEGATES.

Dr. F. H. Stuart said that in view of the near approach of the realization of the new building for the Society—which project had been set on foot and brought so near to completion by the untiring efforts of the present presiding and executive officers of the Society—he thought it would be the wish of nearly every member of the Society that these officers should be continued in office,

both as a matter of sentiment and for the interest of the Society, and he thereupon nominated Dr. George McNaughton for President for the ensuing year.

Dr. Hunt seconded the nomination.

Dr. McNaughton, in reply, expressed his appreciation of the honor, but stated that inasmuch as rumors of dissatisfaction had come to his ears, and open criticisms, he felt that it was not a good thing for the Society to continue any set of officers who were openly criticised by members of the Society, and he, therefore, declined the nomination.

The following officers and delegates were then put in nomination:

President: Dr. J. H. Hunt.

Vice-president: Drs. J. H. Hunt, E. H. Bartley, J. W. Hyde, and W. Maddren.

Secretary: Dr. D. Myerle.

Assistant secretary: Drs. R. J. Morrison, H. B. Delatour.

Treasurer: Dr. C. N. Cox.

Assistant treasurer: Drs. O. A. Gordon, J. E. Sheppard.

Librarian: Dr. W. Browning.

Censors: Drs. H. A. Fairbairn, E. P. Hickok, J. M. Winfield, J. L. Kortright, F. H. Stuart, H. P. Bender, H. B. Delatour, W. S. Applegate, J. M. Van Cott, and H. P. de Forest.

Trustee: Drs. G. McNaughton, Z. T. Emery.

Delegates to the State Society: Drs. H. P. de Forest, G. R. Hall, A. C. Brush, H. A. Alderton, W. F. Campbell, Z. F. Dunning, J. P. Warbasse, H. T. Hotchkiss, J. Rankin, A. C. Bunn, V. A. Robertson, A. W. Catlin, H. R. Price, W. Schroeder, F. J. Shoop, S. J. McNamara, C. H. Goodrich, H. F. Williams, H. A. Bunker, J. M. Clayland, T. B. Spence, J. W. Ingalls, P. Scott, Wm. Simmons, W. Waterworth, C. R. Hyde, W. C. Braislin, H. Webster. From this list twenty-one delegates are to be chosen.

David Myerle, M.D.,
Secretary.

THE BROOKLYN SURGICAL SOCIETY.

Regular Meeting, November 4, 1897.

H. B. Delatour, M.D., President, in the Chair.

EXSTROPHY OF THE BLADDER; SUCCESSFUL IMPLANTATION OF THE URETERS INTO THE RECTUM.

Dr. G. R. Fowler presented a case of exstrophy of the bladder, in which implantation of the ureters into the rectum, by a new and original method, had been performed. The history of the case is as follows:

E. W., aged six, referred by Dr. McCleary, was admitted to the Brooklyn Hospital, with exstrophy of the bladder and epispadias. In view of the unsatisfactory results following the plastic procedures designed to restore the defect in the anterior abdominal and bladder walls in this class of cases heretofore in use, it was decided to utilize the rectum, as a receptacle for the urine, which, according to O'Bierne, is practically empty during the intervals of defecation, the feces being stored at the sigmoid flexure.

The abdomen was opened in the median line, with the patient in the Trendelenburg position, the rectum being thoroughly cleansed primarily. The ureters were identified in their relation to the vessels, the posterior layer of the peritoneum incised for a sufficient extent to expose them freely, and the ureters traced to their termination upon the bladder wall, from which they were detached. The ends of the ureters were cut off obliquely.

A longitudinal incision seven centimeters long was made in the anterior wall of the rectum, only the serous and muscular coats being included in the incision. The edges of this incision were retracted, a diamond-shaped space in the submucous space being thus exposed. A tongue-shaped flap of mucous membrane, with its base directed upward, was cut from the mucous membrane of the bowel in the lower half of the diamond. This tongue-shaped flap was doubled upon itself in an upward direction in such a manner that one-half of its mucous surface presented anteriorly, where it was secured by one or two catgut sutures. A flap was thus secured, both sides of which were covered with mucous membrane.

The ureters were now placed in the incision with their obliquely cut ends lying upon the presenting mucous-membrane

surface of the flap. Two catgut sutures served to secure the ureters in position at this point, and two more were placed in the space represented in the upper half of the diamond, care being taken that these sutures did not invade the lumen of the ureters. The flap-valve and attached ends of the ureters were then pushed into the cavity of the rectum, and the rectal wound closed as follows: The gap in the mucous membrane left by the reflected half of the tongue-shaped flap was first sutured by a running catgut suture. The original wound in the rectal wall was then closed by fine silk sutures, the upper two or three of these being likewise utilized for still further securing the ureters where they passed in the submucous space in the upper half of the diamond. The abdominal wound was then closed.

Prompt recovery followed the operation. The rectum became remarkably tolerant of the presence of urine from the first day following the operation, urination occurring per rectum on an average of every three hours. As time passed this toleration became more pronounced, until at the present time the intervals do not exceed the normal.

The bowel performs without apparent difficulty the double function of a receptacle for both feces and urine. While urination takes place at normal intervals, defecation likewise takes place at normal intervals. The former occurs about once in six hours; the latter takes place but once daily. The movement is generally formed and is not mixed with or accompanied by urine, as far as gross appearances can determine.

Ordinary cleansing after each act of urination suffices to prevent excoriations and eczematous conditions in the anal region, no trace of which is present. The child up to this time, fourteen months after the operation, has shown no evidence of renal disturbance. He attends the public school, and suffers not the slightest inconvenience from the presence of the urine in the rectum.

The following objects are claimed to be obtained by this method of operating:

1. Regurgitation of urine, or passage of feces into the ureters, is prevented by an efficient and permanent valve with a mucous surface applied to the open mouths of the ureters.

2. The circular muscular fibers of the bowel-wall make compression upon the ureters as they lie in the space beneath the muscular coat of the rectum, thus securing occlusion, and afford-

ing additional security against regurgitation during the act of defecation.

Dr. H. B. Delatour complimented the operator upon this beautiful recovery, and said that those who had seen the old method could appreciate the result in this case. He recalled one case operated upon by the old method in which the effort to empty the bladder was so great that it caused a great deal of pain.

Dr. Judd had seen Dr. Hartley of New York operate on one of these cases and the result was very unsatisfactory. He had seen one or two other cases that had been done at the New York Hospital, and has never yet seen one so satisfactory as the one produced by Dr. Fowler.

TUBERCULAR OSTEITIS TREATED BY LIVE STEAM.

Dr. A. T. Bristow presented a patient who came under his care two years ago suffering from a tubercular process in the great trochanter of the left femur, which had existed for eighteen years. There were extensive sinuses in the soft parts, which had burrowed in all directions, and the patient, as a result of long-continued suppuration, had wasted until he weighed but 120 pounds, though his height was five feet ten inches. Previous to his coming under the speaker's charge he had been operated upon twice by another surgeon, whom the reporter was sure did thorough work; but prompt reinfection by the tubercle bacillus followed each operation and the disease kept advancing. The problem which presented itself was not only to get rid of all diseased tissues, but to absolutely destroy the cause of his trouble by destroying the organisms which were responsible for the disease in the first place. The speaker sees many cases of surgical tuberculosis, and his experience is exactly contrary to that of the authority quoted by Dr. Beardsley. He does not believe in the transitory nature of Koch's bacillus. On the contrary, he insists that it is extremely difficult to get rid of it in either soft or bony tissues, and on this fact depends the extremely chronic nature of surgical tuberculosis. Thorough though we may be in our operation, too often the bacilli are left behind in the tissues, and of course the tubercular process continues. In this case he solved the problem that presented itself by the use of live steam. He first thoroughly curetted the diseased bone-focus, which was situated in the great trochanter, laying open all but one of the sinuses, and subjected them also to the curette. He then steamed

the entire area for two minutes with steam from the hospital radiator, which was conducted to the operating-table by means of a suitable hose. The sound parts were protected as well as possible by means of folds of wet gauze. As a result, the tissues subjected to the steam were cooked to the depth of over a quarter of an inch, and at the end he felt that he must have certainly left the wound sterile as far as the tubercle bacillus was concerned. An examination of the curettings taken from the wound previous to the application of the steam showed the presence of the characteristic organism. No ill effects followed the use of steam in connection with the huge wound, nor was he ever after able to get a scraping during the granulating process which showed the presence of the bacillus. The healing process was slow, and the only sinus that was left undivided because of its relation to the muscular structures of the limb he was subsequently obliged to lay open. However, the healing process continued to fill up the wound with sound granulation tissue; and a year from the date of the steaming the healing was complete. The patient now weighs over 160 pounds, and continues in good health. As far as the reporter knew, this use of steam in connection with these tubercular processes is original with him; and he was glad to say that he had had good results. Of course it is necessary to discriminate as to the locality in which it will be safe to use steam for several minutes, lest by the subsequent sloughing we may endanger important vessels. Nevertheless, he had exposed a tubercular cavity of the lower end of the femur to flowing steam for more than two minutes without getting a slough deep enough to endanger the vessels of the popliteal space.

In cases where there is little involvement of the soft parts and the disease is mostly confined to the bone, after a thorough scraping he had been accustomed to fill the resulting cavity with salt solution and then with the red-hot point of the Paquelin cautery bring it to the boiling-point. He had had gratifying results with this method, also. In these cases of tubercular bone disease the problem is to prevent reinfection of the wound. That this is not secured by the ordinary methods the chronicity of these cases, as seen in our hospital wards, goes far to prove.

(*To be continued.*)

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The ninety-second annual meeting of the State Society was held at Albany, January 25th, 26th, and 27th, under the presidency of Seneca D. Powell, M.D., of New York.

The following papers were announced on the provisional program:

TUESDAY MORNING SESSION.

President's inaugural address. Reports of officers and committees. Executive business.

PAPERS.

1. "Throat and Nose Affections and their Relation to General Medicine." Walter F. Chappell, New York.

2. "Ear Manifestations in General Disease." Wendell C. Phillips, New York.

3. "Cases of Acute Non-diphtheritic Inflammation of the Larynx, Requiring the Prolonged Retention of the Intubation Tube." John O. Roe, Rochester.

4. "The Report of a Case of Unusual Contraction of the Visual Field and Disorder of the Color Sense Following an Injury." T. F. C. Van Allen, Albany.

5. "The Railway Surgeon and His Work." C. B. Herrick, Troy.

6. "What Shall the State and Country Do for the Consumptive?" John H. Pryor, Buffalo.

7. "The Advantages of State Control in Medicine, with Results Observed." William Warren Potter, Buffalo.

Election, by districts, of members of the committee of nomination, at close of morning session.

TUESDAY AFTERNOON SESSION.

8. "A Contribution to the Study of Melancholia, with a Report of the Examination of the Blood in Fifty-seven Cases." B. C. Loveland, Clifton Springs.

9. "The Cold-water Treatment of Typhoid Fever in Private Practice." John T. Wheeler, Chatham.

10. "Anemia." R. C. M. Page, New York.

11. "On the Vagaries and Wanderings of Gall-stones, with Clinical Reports." Henry L. Elsner, Syracuse.

12. "The Treatment of Delirium." Joseph Collins, New York.

13. "Paralysis: Prognosis and Treatment." Edward D. Fisher, New York.

14. "The Relation of Bacteria to the Normal Alimentary Canal." Herbert U. Williams, Buffalo.

15. "The Rivals of the Physician in Practice." Reynold W. Wilcox, New York.

16. "The Hygienic Management of Dairies." E. F. Brush, Mt. Vernon.

17. "The Municipal Control of Milk-supply in Cities and Villages, with Report of Health Regulation." T. B. Carpenter, Buffalo.

18. "The Present Status of Expert Medical Testimony." Evarts M. Morrell, Yonkers.

19. "Expert Testtmony." J. B. Ransom, Dannemora.

TUESDAY EVENING SESSION.

"Practical Exposition of the X-ray in Medicine and Surgery." Exhibition in charge of Arthur L. Fisk of New York. (*a*) "Technic and Apparatus." Samuel Lloyd, New York. (*b*) "The X-ray in Medicine." Dr. Williams, Boston. (*c*) "The X-ray in Surgery." Arthur L. Fisk, New York. (*d*) "The X-ray; Clinical Experiences." Wm. Hailes, Jr., Albany.

WEDNESDAY MORNING SESSION.

20. "Some Points in the Technic of the Alexander Operation." Herman E. Hayd, Buffalo.

21. "The Present Status of Vaginal Operations for Diseases of the Pelvic Organs." Edwin B. Cragin, New York.

22. "Remote Consequences of Excessive Uterine Hemorrhage." W. E. Ford, Utica.

23. "Gauze Drainage in Laparotomy." Henry C. Coe, New York.

24. "The Anatomy and Function of the Female Perineum and the Operation for Its Repair When Lacerated." J. Riddle Goffe, New York.

25. "Traumatic Injuries of the Brain." J. H. Glass, Utica.

26. "Formaldehyd Disinfection." E. H. Wilson, Brooklyn. Discussed by Alvah H. Doty and Herman Biggs.

27. "The Past, Present, and Prospective Methods of Treatment of Insanity in the State of New York." P. M. Wise, Albany.

WEDNESDAY AFTERNOON SESSION.

28. "A Year's Work in Appendicitis." Herman Mynter, Buffalo.

29. "The Management of Undescended Testicle in Hernia Operations." William B. DeGarmo, New York.

30. "Investigation and Exploration of the Other Kidney in Contemplated Nephrectomy." Geo. M. Edebohls, New York.

31. "Congenital Dislocation of the Shoulder Backward, with a Report of Seven Cases and an Operation for Its Relief." A. M. Phelps, New York.

32. Discussion: "The Management of Hypertrophy of the Prostate Gland and Its Complications." (*a*) "General Consideration and Catheter Life." L. Bolton Bangs, New York. (*b*) "Prostatectomy and Prostatotomy, Suprapubic and Perineal." Samuel Alexander, New York. (*c*) "Bottini's Galvanocaustic Radical Treatment, and the Palliative Treatment for Hypertrophy of the Prostate." Willy Meyer, New York. (*d*) "Castration for the Relief of Hypertrophied Prostate." L. S. Pilcher, New York. (*e*) "Stone, Associated with Hypertrophy of the Prostate." E. L. Keyes, New York.

33. "Excision of the Fibula for Sarcoma." Samuel Lloyd, New York.

34. "The Treatment of the Fracture of the Femur in Children." Theodore Dunham, New York.

WEDNESDAY EVENING SESSION.

In the Senate Chamber at 7.45 o'clock. Anniversary address by the President. Reception by the President to the members, delegates, and invited guests at the Albany Club at 9.30 o'clock.

THURSDAY MORNING SESSION.

Business session and reports of committees.

35. "Treatment of 'Deficient Excretion from Kidneys not Organically Diseased, and Some of the Diseases Peculiar to Women,' and Diseases of the Skin." L. Duncan Bulkley, New York.

36. "The Relations of the Physician to the Practice of Midwifery." C. F. Timmerman, Amsterdam.

37. "The Conservative Surgery of the Fibroid Tumor." A. H. Goelet, New York.

38. "Report of a Case of Osteotomy of Both Tibiæ and Fibulæ for Symmetrical Anteroposterior Angular Deformity." F. H. Peck, Utica.

39. "Intratracheal Injections for Diseases of the Bronchial Tubes and Lungs." H. S. Drayton, New York.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

A MANUAL OF MEDICAL JURISPRUDENCE. By Alfred S. Taylor, M.D., Lecturer on Medical Jurisprudence and Chemistry in Guy's Hospital, London. New American edition of 1897 from the twelfth English edition. Thoroughly revised by Clark Bell, Esq., of the New York Bar. In one octavo volume of 831 pages, with 54 engravings and 8 full-page plates. Cloth, $4.50; leather, $5.50. Philadelphia and New York: Lea Brothers & Co., Publishers, 1897.

Taylor's "Medical Jurisprudence" is too well known to both the legal and medical profession to need any encomium. That it has reached its twelfth edition in America and England shows the high appreciation in which it is held in both countries. Its revision by Clark Bell, Esq., insures its perfect adaptability to the wants of medical students, practitioners, and lawyers in this country.

LECTURES ON THE MALARIAL FEVERS. By William Sydney Thayer, M.D., Associate Professor of Medicine in the Johns Hopkins University. New York: D. Appleton & Co., 1897. Pp. 326.

In the nine lectures contained in this volume the author has presented the best résumé of the subject of malaria with which we are acquainted, and has given in an admirably concise form the most recent opinions held in this much-disputed field of medicine.

In the course of the discussion he comments on the loose manner in which the term "Malaria" is used, and the utter unreliability of statistics consequent thereon. He compares, for instance, Brooklyn with Baltimore, as follows: In Brooklyn, during the six years ending in 1890, there were recorded 1413 deaths from malarial fever, or 32.62 per 100,000 of average population, and from typhoid fever 1002, or 23.13 per 100,000. In the same period 934 died from malarial fever in Baltimore, or 41.51 per 100,000, and from typhoid 904, or 40.17 per 100,000; and yet, during seven years, while there were 48 deaths in Johns Hopkins Hospital from typhoid, there were only 3 caused by malarial fever; or, to express it in another way, while in the Hospital, where the diagnosis was carefully and accurately made, the deaths from typhoid were sixteen times as many as from malarial fever, outside the proportion was as 1.01 to 1. Dr. Thayer says that it is "probably safe to say that ninety per cent., at least, of these deaths reported as from malarial fever were due to some other cause—in most instances, probably, typhoid. If this be true of Baltimore, which is situated in a malarious region where relatively severe infections are not altogether uncommon, what must we think of the condition of things in

Brooklyn, for example. where only the milder forms of malaria prevail, the few fatal cases representing probably the occasional instances of pernicious fever brought from Panama and the tropics by incoming steamers?"

Three colored plates, showing the parasites of tertian fever, of quartan fever, and of æstivo-autumnal fever, together with full description, add to the value of the book.

THE TRAINED NURSES' DIRECTORY.

This little pocket directory is compiled and edited by M. Louise Longeway of 33 East Twenty-second street, New York, Graduate of the New York Training School of Bellevue Hospital, and contains the names of nurses carefully selected by prominent physicians and surgeons of New York and vicinity from their private lists. It is published annually in November, at an annual subscription of $1.00. An addendum is issued in June.

MANUAL OF GYNECOLOGY. By Henry T. Byford, M.D., Professor of Gynecology and Clinical Gynecology in the College of Physicians and Surgeons of Chicago, etc. Second edition, containing 341 illustrations, many of which are original. Philadelphia: P. Blakiston, Son & Co., 1897. Pp. 596. Price, $3.00.

In this second edition much new matter will be found, including new chapters on the anatomy of the pelvic organs, and venereal diseases. Those on hyperplasia, chronic inflammation, and subinvolution have been entirely rewritten, and the chapters on urinary and fecal fistulæ and ectopic gestation have been almost entirely rewritten. Descriptions are given of the use of the cystoscope and of ureteral instruments. In addition, new illustrations, many from the author's cases, have been incorporated. Another feature which is very helpful to the student is the system of marginal notes, which serve as pointers to the important matters discussed.

ABOUT CHILDREN. Six Lectures given to the Nurses in the Training School of the Cleveland General Hospital in February, 1896. By Samuel W. Kelley, M.D., Professor of Diseases of Children in the Cleveland College of Physicians and Surgeons (Med. Dept. Ohio Wesleyan Univ.); Pediatrist to the Cleveland General Hospital; Consulting Physician to the Cleveland City Hospital; President, 1896 and 1897, Ohio State Pediatric Society; Editor *Cleveland Medical Gazette.* Pp. 180. Price, in buckram, postpaid, $1.25, net. Cleveland: The Medical Gazette Publishing Company, 1897.

Although the lectures making up this volume were delivered to nurses, still, all who are interested in medicine, whether nurse, practitioner, or student, will find in them much valuable information that cannot be found elsewhere. Indeed, we would commend it most heartily to those to whom it is dedicated by the author: "All who care for children, or labor for their welfare."

HANDBOOK OF MATERIA MEDICA, PHARMACY, AND THERAPEUTICS, Including the Physiological Action of Drugs, the Special Therapeutics of Disease, Official and Practical Pharmacy, and Minute Directions for Prescription Writing. By Samuel O. L. Potter, A.M., M.D., M.R.C.P., London; Professor of the Principles and Practice of Medicine and Clinical Medicine in the College of Physicians and Surgeons of San Francisco, etc. Sixth edition. Fully revised and greatly enlarged. Philadelphia: P. Blakiston, Son & Co., 1897. Pp. 900. Price, $4.50.

"Potter's Materia Medica" has become one of the standard text-books. To have reached six editions in ten years is something which can be said of but few books, and of itself tells the story of its popularity and usefulness.

In this edition we find a large amount of new matter, including forty-six new articles, while one hundred and seventy articles have been rewritten. In the section on materia medica there have been inserted thirty-three new articles descriptive of new preparations and remedies, such as aseptol, aseptolin, lycetol, ferratin, etc.

In the section on therapeutics we also find much that is new. The "Treatment of Poisoning," in the appendix has been carefully revised, and is especially adapted for rapid reference in emergencies. The "List of Latin Words and Phrases" has been extended, and is believed by the author to be the most complete list of its kind published.

One of the most valuable features in the book is the admirable index, while a "Table of Prescription Doses and Quantities" will be found of great help. As this is printed on the inside of the cover after the thirty-two pages of advertisements it will be very likely overlooked.

In a work so worthy of commendation it seems hypercritical to call attention to so small a mistake as is found in the dedication, where a plural subject is given a singular verb. It is one of those oversights which occur in the best of books.

THE PRINCIPLES OF BACTERIOLOGY. A Practical Manual for Students and Physicians. By A. C. Abbott, M.D., Professor of Hygiene and Director of the Laboratory of Hygiene, University of Pennsylvania, Philadelphia. Fourth edition, enlarged and thoroughly revised. Handsome 12mo., 542 pages, 106 illustrations, of which 19 are colored. Cloth, $2.75. Philadelphia and New York: Lea Brothers & Co., Publishers.

Those who have been accustomed to look upon Dr. Abbott's admirable work either as a book of reference or as a laboratory guide, will not be disappointed in perusing the fourth edition. This work contains all the desirable qualities of the former edition, and has in addition some very valuable information of a more recent date. The chapter on the bacillus of the bubonic plague is new and of great interest. The description of cultural methods for the gonococcus is of importance, and the arrangement of that portion of the

book devoted to the application of bacterial methods, renders it very valuable for teaching purposes. The illustrations are well selected and well executed.

E. H. WILSON, M.D.

A PRACTICAL TREATISE ON SEXUAL DISORDERS OF THE MALE AND FEMALE. By Robert W. Taylor, A.M., M.D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons (Columbia College), New York, etc. With 73 illustrations and 8 plates in color and monotome. Philadelphia: Lea Brothers & Co., 1897. Pp. 440.

In this book Dr. Taylor has given us a work which is fully up to the standard of excellence of his volume on "Venereal Diseases," published two years ago.

"Sexual Disorders" treats exclusively of those conditions which lead to impotence and sterility in the male, and the importance of the subject is shown by the fact that statistics demonstrate that out of six unfruitful marriages the woman is at fault in five, and the man in one instance.

In considering the subject the usual classification is adopted, *viz.*: (1) Impotence, or the condition when spermatozoa are present but the mechanism of ejaculation or erection is wholly or in part interfered with; (2) sterility, in which two conditions are found: (*a*) the spermatozoa may be entirely absent or so imperfectly formed that they have no fecundating power; (*b*) spermatozoa are produced, but from some obstruction in the urethra, seminal vesicles, or prostate, ejaculation cannot take place.

The various conditions which give rise to impotence are considered in detail, beginning with chronic inflammation of the urethra.

The author considers that by far the most frequent cause of sexual weakness is chronic inflammation of the prostate, which is evidenced by premature ejaculation, or in other cases by so-called spermatorrhea, which is, in fact, only a discharge of prostatic secretions by muscular efforts on straining at stool, squeezing out the contents of the prostatic crypts.

This chronic inflammation of the prostate may assume two forms: (1) The inflammation may be limited to the submucous tissues of the prostatic urethra, with formation of contractile fibrous tissue, which presses upon the nervous structures of the caput gallinaginis, and gives rise to all sorts of reflex nervous symptoms, which are generally classed under the head of sexual neurasthenia; (2) the inflammation may be limited to the prostatic crypts and follicles.

The chapter on the relations of chronic seminal vesiculitis to impotence and sexual neurasthenia is very clear, and gives concisely the results of the most recent work on that subject.

The diagnoses by rectal touch, and the only available means of treatment, which is by stripping or massaging and expressing the contents of the vesicle with the fingers in the rectum, are well explained.

Sexual neurasthenia is well treated. (1) The form in which the neurasthenia is reflex, as a result of some irritation along the genital tract; (2) the class of cases where the nervous system is weak, unstable, and deteriorated, and when the patient's attention is constantly directed to some fancied morbid condition of his genitals.

The effect of coitus reservatus, or withdrawal, in inducing a condition of neurasthenia in the male is clearly described in a special chapter.

The remainder of the volume is devoted to a description of those, hitherto, little understood conditions of hypertrophy of the external organs of generation in the female—which were generally spoken of as elephantiasis—either simple or syphilitic, but which Dr. Taylor regards as only a slow chronic form of connective-tissue hyperplasia.

The book deserves the careful study of every practitioner, for the subjects treated of have been far too long relegated to the ignorance and quackery of charlatans.

HENRY H. MORTON, M.D.

SIMON'S CLINICAL DIAGNOSIS. New (2d) Edition, Revised and Enlarged. A Manual of Clinical Diagnosis by Microscopical and Chemical Methods. For Students, Hospital Physicians, and Practitioners. By Charles E. Simon, M.D., late Assistant Resident Physician Johns Hopkins Hospital, Baltimore. In one very handsome octavo volume of 530 pages, with 135 engravings and 14 full-page colored plates. Cloth, $3.50.

The present work is one of the results of the careful, mathematical investigation which has characterized medical study in the last few years. It leads us into a very important department. The author states that it has been his aim to present to students and physicians those facts in clinical chemistry and microscopy which are of practical importance.

In elucidating those facts he has gone into such minute, one may say elementary, detail that the student and practitioner, even though they may have had no special training in this department, will be enabled to obtain satisfactory results, or, in other words, will be enabled to conduct careful examinations of urine, sputum, etc., etc. It will be a great boon to the country practitioner who is far removed from the well-equipped laboratory of the city. It will be a stimulus to us all to follow out the process of diagnosis to its minutest detail. It will reveal how far short of exactness a diagnosis must fall which is not arrived at by such methods. It is a blow at empiricism.

The description of normal material is given as prominent place as the pathological. The secretions of the mouth, the gastric juice, feces, nasal secretions, sputum, urine, transudates, exudates, cystic contents, semen, vaginal discharges, and milk, are the various subjects considered. The illustrations are numerous and fine, and adds greatly to a work which demands ocular demonstration. We would suggest some addition to the colored plates. The uric-acid crystals would be much better shown if colored. The subjects are treated in a full, clear, and scholarly way. No one can accuse the author of obscurity. The author has accomplished the work he laid out for himself, *viz.*, to aid in bringing the department of clinical chemistry and microscopy within the reach of the general practitioner. He has demonstrated that these departments are not surrounded by the mystery nor hedged in by the technical barriers that common opinion has created for them.

He starts out with the admonition that correctness of diagnosis demands their aid. He asserts that they are not frequently employed. There is but one conclusion, and that is, that full, correct diagnosis is infrequent. He

POLHEMUS MEMORIAL CLINIC.

has made his contribution to the remedy. It behooves medical men to employ it.

The graceful acknowledgment he makes of his wife's services is very pleasing. We can only add that she and her husband have placed the profession under great obligations.

MISCELLANEOUS.

POLHEMUS MEMORIAL CLINIC.

The first lecture given in the Polhemus Memorial Clinic was by the President of the College, A. J. C. Skene, M.D., LL.D., on January 4th. The subject of his lecture was "Salpingitis," and was the regular lecture in his course to the senior class of the Long Island College Hospital.

Before beginning his theme he addressed the audience, which contained, beside the class, members of the college faculty and other physicians attracted by the interest of the occasion, as follows:

"Gentlemen, companions in devotion to the study of medicine. Mortals, favored by fortune as we are, may well be proud and happy, and indulge in liberal salutations and congratulations on this occasion. Science teaches that matter becomes organized through psychic potentiality to meet the requirements of mind. This is beautifully illustrated in the magnificent memorial palace which we have now the honor of occupying. The mind of a noble woman sustained in action by one of the most honored members of the bar, evolved this great institution, every atom of which proclaims that it originated in a generous soul, and was nutured by profound wisdom.

"The inspiration or motif in the mind of Mrs. Polhemus was evidently to keep alive and active the leading characteristics of her husband, benevolence and beneficence, qualities of head and heart that endeared him to her, and to all who knew him. Bountiful provision has been made for the care of the sick and injured poor in a manner that the richest in the land might envy. The generosity of the benefactress is manifested here in all its comprehensiveness. Equally well defined is the superior wisdom displayed in the College Department in which men are to be educated and trained for professional duties.

"Insignificant, indeed, are inanimate monuments of marble

and bronze when compared with this living institution for promoting the health and well-being of the people, and advancing the cause of medical education.

"All honor and praise to the donor for granting us the privilege of becoming a part of this, one of the most complete college buildings in the world, both in construction and equipment. May the Powers Divine enable us to show our appreciation and gratitude; and that we are worthy to occupy it, by guarding and protecting it with manly zeal and solicitude, so that it may pass to those who come after us in all its original beauty and utility. May we never forget that 'unto whomsoever much is given, of him shall much be required; and to whom men have committed much, of him will they ask the more.'

"And now, friends and fellow students, let us for a moment forget the facts of cold, logical science for the mastery of which we have to-day assembled, and indulge the hope and belief that from the heights of Spirit land this memorial monument may be seen, and the words uttered in honor and praise be heard by him whose good life it commemorates and illustrates."

As the President concluded his remarks the electric lights were extinguished and a portrait of the late Henry Ditmas Polhemus, in whose memory the Clinic was erected, was thrown upon the screen.

MEDICAL SOCIETY OF THE COUNTY OF KINGS. OFFICERS FOR 1898.

At the annual meeting, held January 18, 1898, the following were elected: President, Jos. H. Hunt; vice-president, E. H. Bartley; secretary, David Myerle; assistant secretary, R. J. Morrison; treasurer, Chas. N. Cox; assistant treasurer, I. A. Gordon; librarian, William Browning; censors, H. B. DeLatour, H. A. Fairbairn, J. M. Winfield, J. M. Van Cott, J. L. Kortright; trustee, George McNaughton; delegates to the Medical Society of the State of New York, H. P. DeForest, Gordon R. Hall, A. C. Brush, H. A. Alderton, Wm. F. Campbell, Z. T. Dunning, James P. Warbasse, H. T. Hotchkiss, John Rankin, A. C. Bunn, P. Scott, Victor Robertson, H. R. Price, William Schroeder, Frederick J. Shoop, Sylvester McNamara, H. F. Williams, William C. Braislin, J. M. Clayland, William Waterworth, William Simmons.

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

ENTERED AT BROOKLYN, N. Y. POST OFFICE AS SECOND CLASS MATTER.

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VOL. XII. No. 3. WHOLE No. 123. | BROOKLYN, N. Y., MARCH, 1898. | Single copies 25 cents $2 a year, in advance

ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

ENDOMETRITIS CHRONICA.

BY FREDERIC J. SHOOP, M.D.,
Brooklyn, N. Y.

Read before the Brooklyn Gynecological Society, November 5, 1897.

Of all the diseases of women which present themselves to the gynecologist, perhaps the most frequent is chronic endometritis, either in its simple form or as a concomitant of other and more serious affections of the uterus and its adnexa. In support of this statement, note that out of 70 successive cases which came to the department of gynecology at the Central Throat Hospital Dispensary with suspected "womb trouble," examination revealed in 49 of them the disease under consideration; the others proving to be cases of pregnancy, cystitis, gonorrhea, caruncle urethræ, and rheumatism. Of these 49, 15 had coexistent fibroid degeneration of the uterus, salpingitis, or ovaritis; 22 had various degrees of laceration of the cervix uteri, and 12 were simple cases of the disease. Six or seven were cases of cervico-endometritis.

No age is exempt, though it occurs more frequently after puberty up to about forty years, and in the single as well as the married, most often accompanying laceration of the uterine cer-

vix. Four of the above cases were single women, two of them having had one or more miscarriages. In private practice the proportion of single cases to the married has been larger, in my experience.

The scope of this paper shall be confined to the study of the disease as it appears in its simple form, and as it occurs in company with laceration of the cervix.

We have to deal with a membrane covered with columnar ciliated epithelium in the corporeal portion and cervical canal, and flat or squamous epithelium as it emerges from the cervical canal at the external os; a membrane which has no submucosa, as we find it in other mucous membranes—a membrane which sheds its epithelial covering and renews it periodically throughout a certain portion of the individual's life, and capable of throwing out a projecting fold to envelop an impregnated ovum. Embedded in this membrane are tubular glands with columnar epithelium, which dip deep down into the muscular wall of the uterus. These glands secrete a thin mucus and are concerned in the renewal of the mucous membrane when the latter has been removed by injury or by operation. In the cervical portion are embedded racemose glands, which secrete a thick and more tenacious mucus. There are also vesicles which have received the name of glands of Naboth.

Bearing these points in mind, the different behavior of this membrane from that of other mucous membranes under chronic inflammation, is at once apparent. We have the hyperemia, and hypersecretion, and mucopurulent discharge similar to all mucous membranes. The inflammation may progress no further, but continue in this condition for an indefinite time. It may, however, extend to the glands, the lumen of which becomes filled with the secretion, mixed with exfoliated epithelium, causing distention of the glands. The membrane is now mottled with very dark-red or brown spots owing to numerous punctate hemorrhages into the mucosa. The discharge becomes sanguinopurulent and mixed with the exfoliated epithelium. Again the glandular elements may multiply, forming an adenomatous degeneration of the mucosa with polypoid projections from the surface of the membrane into the cavity of the uterus. Or the glands may have their orifices closed and become distended with thin mucus or sanguineous mucus forming retention cysts, the membrane thickened and infiltrated with the secretions. A further progression of this form of the inflammation produces atrophy of the

glands, the stroma of the mucosa changes to simple connective or scar tissue, obliterating the vessels, and all structures peculiar to mucous membranes.

Chronic endometritis of somewhat long standing is very apt to be accompanied by inflammation of the uterine muscular structure to a greater or less extent, no doubt due in part to the dipping of the utricular glands into its substance. The muscle structure becomes infiltrated with the inflammatory products and hypertrophy takes place. Thus, chronic endometritis may be one of the exciting irritants which bring about the fibromatous or adenomatous degeneration of the organ. In all of these forms the presence of some one of the staphylococci, streptococcus pyogenes, gonococcus, or mixed infection may be demonstrated.

In the cervix similar conditions may prevail. The secretion is very much thicker, less likely to be purulent, though it is mixed with that from the cavity of the uterus when the mucous membrane of both body and cervix is involved. In that case, if the discharge be wiped from the cervix, the characteristic corporeal discharge may be seen unmixed passing from the cervix. The mucous membrane of the canal may become hypertrophied and roll out in such a way as to resemble a laceration, when none exists. Exfoliation of the squamous cells of the vaginal portion of the cervix goes on faster than renewal takes place, so that the young cells are red in appearance and velvety to the touch of the finger, and bleed easily. The Nabothian glands often become distended and visible to the naked eye as pearly white or purplish, rounded bodies, and feel like shot under the mucous membrane.

The disease may exist in the whole or only a portion of the mucous membrane lining the cavity of the uterus, or in the cervical canal alone, or in both cavity and cervix. We may meet with two varieties within the uterine cavity at the same time, one part being affected by the glandular form and another part, or all of the rest, by that form in which the stroma of the membrane is principally involved.

The chronic inflammation may result from an acute invasion gradually merging into the chronic; it may follow the taking of a cold at the menstrual period, beginning as a chronic inflammation at the start; may occur in connection with a subinvolution of the uterus after parturition or an abortion, or may be caused by gonorrheal infection invading gradually as a chronic inflammation.

The symptoms are similar to those occurring in other affections of the generative organs: Disturbance of digestion; headache; malaise; nervousness; hysteria; neurasthenia; mental depression; melancholia; pain in back, lower abdomen, and in legs; periods apt to be prolonged; flow more abundant and more often; leucorrhea, more or less profuse; pruritus, from the irritating discharge; and sterility. Then there is often met with an extreme general debility and physical depression which seem apparently out of all proportion to the amount of lesion, and which often lead one to suspect before an examination that he has a case of malignant disease to deal with.

In all the works I have consulted I have seen no adequate explanation for this condition, but from some remarks dropped by Dr. Walter B. Chase, as we were working on these cases, I got a hint which no doubt will set us on the right track. It is his opinion that this depression is caused by septic absorption, and is, in fact, a mixed form of septicemia. Without wishing to make a hair-splitting distinction I prefer to call it *toxemia* and *make the claim that it exists in every case in a greater or less degree, and that it arises from the toxins developed by the pathogenic bacteria present;* which toxins are absorbed into and poison the general system.

According to Sutton and Giles, as stated in their recent work on "Diseases of Women:" "Acute endometritis is always a result of sepsis, either from micro-organisms infecting after labor or instrumental interference with the uterus, or abortion; from gonorrheal or other septic vaginitis, or from gangrene of uterine fibroma." If this is so in the acute cases, why is it not equally true with the chronic?

All other conditions given by various writers as causes of chronic endometritis do occur independently of endometritis when no pathogenic bacteria are present. The treatment should be good drainage and use of antiseptics, as in any infected wound or abscess.

Many cases of cervico-endometritis of mild character are readily cured by one or two applications of carbolic acid or iodized carbolic paste, to the interior of the cervical canal, followed by antiseptic douches. So, also, with similarly mild cases of the corporeal endometritis, carrying the application into the cavity of the uterus, applying ichthyol and glycerin tampons, and followed by the antiseptic douche.

The severer forms demand dilatation and thorough curettage at

once, under strict antiseptic methods, followed by antiseptic applications and daily douches. Nabothian follicles should be punctured; lacerations, if deep or if healed with hard, cicatricial tissue, or have fungoid appearance, should be repaired; but otherwise a slight laceration does not interfere with resolution.

The following works have been consulted in the preparation of this paper: Penrose "A Text-book of Diseases of Women," Sutton and Giles' "Manual of Diseases of Women," Delafield and Prudden's "Handbook of Pathological Anatomy and Histology;" A. J. C. Skene's "Diseases of Women," Mann's "American System of Gynecology," and Wood's "Reference Handbook of Medical Sciences."

146 S. Portland avenue.

DISCUSSION.

The President: You have heard the paper of Dr. Shoop. It certainly appeals to us as one of the most prevalent maladies of the women of to-day. It is open for discussion.

Dr. W. B. Chase: Mr. President and gentlemen: To the very succinct and, I believe, accurate description of this disease, there seems to be nothing lacking. Its etiology is certainly a matter of interest—interesting in itself and also interesting in the bearing it has on appropriate treatment. Without doubt the disease is often a matter of infection, as has been pointed out by the essayist to-night; and the essayist gave me the honor of embodying in his paper my views concerning the principal factor of its production.

As he said, the deleterious influence exerted on the system by the disease is a toxemia. It seems to me that we are justified in this conclusion by the results of treatment. If it is a simple case and due to infection, in proportion as we can disinfect the cavity of the uterus and produce drainage we get a relief of the condition; if the tissues are too deeply involved, then we have to resort to measures whereby the greater amount of diseased material is removed, giving Nature an opportunity to produce a new lining membrane in the uterus. It would be very interesting to trace in the clinical history of chronic endometritis and cervical endometritis, not only the relation between the infection and the diseased endometrium, but the influence, as well, this disease exerts in the production of the accompanying dysmenorrhea. The inability, when menstruation occurs in these cases, to properly exfoliate the lining membrane of the uterus is a serious barrier in the management of these cases. If we bear in mind that

the physiological result of normal menstruation is to leave the uterus in the most perfect condition for the retention and impregnation of the ovum, we shall be prepared to understand how frequently this is the active and persistent cause of sterility. So it is, we find, after appropriate treatment, resumption of more normal menstruation and greater liability to conception.

As regards the question of treatment, I had almost decided within the last three or four years that local applications were not of very much value in chronic endometritis, but more experience and larger observation have led me to modify my opinion somewhat, and I now believe there are cases in which the application of alteratives and mild escharotics has its utility, and sometimes results in the cure of the patient. I regard drainage of the very highest value; and where the simpler methods are unavailing in producing relief within a moderate period of time, I have in a large number of cases resorted to curettage with the most satisfactory results. In cases of women who have been entirely invalided by a chronic endometritis, associated with hyperplasia, one or three curettings, at an interval of from one to three or four months, has resulted in the recovery of those who were entirely unable to do anything. In all the minor operations of gynecology I know of none which has produced in my hands more satisfactory results than that of curettage for chronic endometritis. That this should be done under strict antiseptic precautions no one will deny, and that the patient, after operation, should be kept in a reclining position for some period of time I regard as equally important.

With a clear discrimination of the reasons why curettage should be done, or other methods of treatment employed, it seems to me that a disease which was formerly considered incurable can in the great majority of cases be relieved to a considerable extent, and in a very good percentage of cases cured.

Dr. George McNaughton: I came late, consequently failed to hear most of the paper.

Curetting gives fairly satisfactory results in most cases of this nature.

If flexion of the uterus is present, an attempt should be made to correct the malposition, else the drainage will be faulty. This operation should be repeated at intervals of two months for three times, particularly if the case be of specific origin.

It is not wise to wait for a second general endometritis to develop.

Dr. L. Grant Baldwin: I believe in discussing this subject we should make a distinction, possibly different from the writer of the paper, dividing endometritis into cervical and corporeal, as I believe that in causation, symptoms, and treatment they are very different. In my experience I have not found the so-called chronic corporeal endometritis to be as common as the gentlemen who have spoken. In the cases that are so designated I believe that the metritis is not the accompanying but the offending condition, and that the inflammation or thickening, or what you may please to call it, of the mucous membrane of the body of the uterus is the symptom of the metritis, and in many cases I believe it should not be dignified as a disease itself, for in the majority of instances it is simply a symptom of chronic metritis. I am sorry that I have not had as good results in the curetting of such cases as some of the Fellows who have spoken. I find it is necessary to establish better drainage than gauze packing or simple dilating at the time accomplishes; that is, if the disease is in the body of the uterus. I think we shall find at the internal os there is stenosis or obstruction to drainage; not always occlusion, but frequently a fold of the mucous membrane which surrounds the internal os like a valve, which does not prevent a sound or any instrument from passing into the uterus, but forms a sort of valve, that must be very carefully removed or nothing will avail. And in addition to that I almost invariably insert a solid glass stem and allow it to remain from one week to three months, and I have found better results from that than I have where I have simply packed with gauze and depended upon drainage from that source.

Another point which has not been mentioned: and that is, that in this condition the uterus is usually enlarged and any laceration of the cervix should invariably be repaired. If not, I think the uterus will remain large in size, will remain heavy, will sag down and become chronically congested, and the symptoms will recur; but if the cervix is properly repaired the involution in the uterus goes on and the subinvolution is cured, which I believe is the condition, and not the endometritis. Another remedy which I think very favorably of, and which I invariably give to such patients, is small doses of ergot or Hydrastis Canadensis. I believe this completes or helps to complete the cure to a very marked extent.

Dr. Wm. H. Skene: Some years ago a patient came to my clinic at the hospital suffering from pruritus vulvæ.

She gave me her history, which is as follows: Nine years ago

she contracted syphilis from her husband, and had a slight discharge from the uterus. Everything had been done to relieve her, but without success.

I advised her to enter the hospital to be curetted, which she did. The pruritus was entirely relieved for one year when it recurred. I advised her to enter the hospital and be again curetted, but she has not done so yet.

Dr. McNaughton: How old is the patient, is she still menstruating, and if so is the flow offensive?

Dr. Skene: She is thirty-eight years old, has a scanty flow, which is offensive.

Dr. J. E. Langstaff: I would like to make a suggestion concerning the treatment of endometritis. In treating the cervical canal with absorbent cotton—that is, getting away all the mucus and making the usual appplication of nitrate of silver or other drugs—I put in a firm pledget of cotton, filling the entire canal up to the fundus, which I leave there. This is put in, of course, with each treatment, with nitrate of silver, every other day, and passes out within twelve to twenty-four hours. It gradually, by its pressure, reduces the congestion in the cervical canal, gradually thins the body of the cervix, and in that way checks to a great extent the amount of discharge. I think it is quite an improvement on the usual treatment of simply applying to the mucous membrane such medicines as destroy completely the glands and the mucous membrane. The strength of the nitrate-of-silver solution is about 40 grains to the ounce. I apply that on the cotton and leave it in the cervix for a short time, sufficient as I think to take effect on the mucous membrane, destroying a thin layer of the mucous membrane, and then, by the application of the cotton, keeping up a pressure on the circulation which will retard the action of the glands until the next treatment. I pass in with the applicator the cotton wrapped tightly, a sufficient length to reach well up into the uterus, and withdraw it making pressure at the lower end. In withdrawing it, of course, it tightens up more firmly and it is difficult to get the cotton out after it is applied; the mucous membrane is dry and causes the cotton to adhere. I apply on this cotton usually iodoform, merely as a germicide, or to assist in the healing of the tissue that has been destroyed by the nitrate of silver. I find that it does not cause uterine colic or irritation of any kind. Of course it requires a tampon in the vagina also to keep the uterus up in position. I think this tampon in the cervix has a

tendency to straighten the canal and widen it, so in case of a flexure it will assist in the drainage, and also dilates the internal os, as I notice each time I can put in a larger pledget.

Dr. J. W. Hyde: Mr. President, I regret exceedingly that I did not hear the paper and, of course, I cannot discuss it. This subject of chronic endometritis is one that every gynecologist has to contend with more or less in practice. I only want to say one word, and that in regard to the treatment of such cases. During the last year or two, having had some very satisfactory results in cases of chronic cystitis by irrigating the bladder with a solution of permanganate of potash, I made up my mind to try the same treatment in some of my cases of endometritis, and I have had two cases recently that I have treated in this way with exceptionally good results. It may not be that I would achieve so good results in subsequent cases; in fact, we are very apt to think if we have one or two successes that we have just the thing we can always depend upon in like cases, only to be disappointed later. However, as the results were good, I give them to you.

In one of these cases was considerable subinvolution and retroversion. I curetted first and later applied the compound iodin paste—the value of which we know so well. After getting the effect of that I began the irrigation with the permanganate of potash, and I have been greatly surprised and pleased at the rapid relief of every symptom connected with the case. How much of it may be due to the first treatment—the curettage and the compound iodin paste—I cannot say, but I have used that treatment in many cases prior to these without obtaining the same good results. The uterine enlargement was very considerably reduced, the painful menstruation almost entirely ceased, the leucorrheal discharge practically gone, the basic headaches and the peculiar nervous reflex troubles that we have to contend with so much in just that class of cases, were very much relieved. In the second case there was not so much subinvolution as in the preceding case, but there was a second stage of prolapse and some stenosis of the internal os, in addition to the endometritis present, forming a typical condition for the obstructive dysmenorrhea from which this patient suffered. Treatment was by dilatation, intra-uterine irrigation twice a week with hot solution of permanganate of potash, 1 to 6000, and daily vaginal douches of hot water given by herself. The obstruction rom stenosis at the internal os, or the overlapping or valvular

condition of the mucous membrane of the endometrium, seemed to me to be a part of the inflammatory process and when the inflammatory conditions behind it were benefited, that seemed to be absorbed, and I am inclined to think that this condition oftentimes is simply a swollen condition of the endometrium, which abates with the general treatment.

All of the pathological factors in this case disappeared, as in the first case; the point of interest being the early response to the treatment.

In both cases the patients believed themselves to be cured of long-standing disease. It is possible that permanganate of potash may become as valuable a therapeutic agent in gynecological as in genito-urinary work.

Dr. F. J. Shoop: I have not much of anything else to say on the subject, except in reference to the application of nitrate of silver—that I never use at all. I have been afraid of producing cicatricial contraction or stenosis, and I seldom use anything other than the carbolic acid or carbolic acid and iodin combined.

In regard to Dr. Hyde's reference to permanganate of potash, I think it is a good suggestion. I believe that the treatment should be antiseptic even after we have done curettage, and the uterine injection of the permanganate of potash or some other non-irritating antiseptic would be good practice; anyway, the douching of the vagina with some antiseptic is certainly necessary.

FRACTURE OF THE SKULL.

BY WARREN S. SIMMONS, M.D.
Assistant Surgeon to St. John's Hospital

Read before the Brooklyn Surgical Society.

Of all the injuries that the human body is capable of receiving, those of the head have always been to me of the greatest interest. That a patient can recover from the most frightful traumatism of the skull, provided there is no injury to its contents, and in other instances in which the skull itself is the site of minor fractures, but with intracranial lesions which mark the patient for death or a life burdened with epilepsy or loss of intellect, is certainly a most interesting problem, and one too, which will well repay the careful study of such injuries and their treatment.

It was not long ago that standing by the bedside of a physician, who had received a severe fracture of the base, and recognizing the hopelessness of surgical treatment for this special condition, in the great majority of cases, I decided to select for this paper the subject of fracture of the skull.

These fractures are generally described as fractures of the vertex, lateral regions, and base. Those of the vertex and lateral regions are usually produced by direct contact with some force acting directly at the point of fracture, while those of the base are more often the result of injuries received at other points on the skull, the so-called fractures by contre-coup. There can, however, be direct fractures of the base, as in cases where instruments such as canes, sticks, and umbrellas have penetrated the orbit, thereby fracturing its bony roof, and traumatisms received through the nasal and oral cavities. Falls from some height, in which the patient lands on his feet or buttocks, the force being transmitted through the vertebral column, often cause fracture of the posterior fossa. This last, however, can of course, be considered an indirect method of base fractures.

Blows received at the vertex, may moreover, not only produce depressed or comminuted fractures at the point struck, but also be accompanied by fissures which extend through the lateral regions to the basal fossæ. Such fractures usually follow the shortest route to the base though this is not always the case. No rule can be formulated which will apply to the course of these fractures in every instance, both on account of the irregularity of the surface of the skull and the difference in thickness of its various parts.

The fractures of the vault may be simple fissures of both or one table, depressions of both tables together or of the inner alone, and fissure of the outer with depression of the inner table; as in some cases of gunshot wounds, the outer table has only apparently been fissured while there has been found depresssion and comminution of the inner table and portions of the bullet discovered inside the cranial cavity.

There also occur depressions with comminution of the surrounding bone. All of these conditions with the exception of the gunshot injuries may be simple fractures or compounded by a wound of the scalp.

The diagnosis of simple fissures and depressions of the inner table can only be made by the symptoms of intracranial injury that follow the lesions of the bones, while those of the depressed

fractures without wound of the scalp can often be recognized by examination with the fingers applied outside the soft parts, or what is perhaps better, when in doubt of the existence of a fracture, by turning back a flap of scalp and exposing the injured area to direct observation.

There are many conditions that may lead to a mistaken diagnosis unless this procedure is carried into effect in doubtful cases, such as old depressions which have existed for some time under the scalp at the seat of the recent traumatism, depressions from disease of the cranial bones, and the normal depressions, which are found in every skull, but which do not correspond in any given number of cases.

As an example of the value of exploratory incision and turning back a flap of the scalp to inspect the surface of the skull, I will cite the following case: Five weeks ago an adult male patient was admitted to the service of Dr. Hopkins at St. John's Hospital, with the following history: He was picked up by the ambulance surgeon in a dazed and semiconscious condition after an ineffectual attempt to stop a trolley-car with his bicycle. Examination at the hospital revealed a small lacerated wound over the anterior portion of the left parietal region and also two minor wounds over the chin and left shoulder. He would answer questions rationally but had no recollection of the accident and could not be made to realize where he was. While examining the wound in the scalp with a probe for signs of depression or fracture the patient had a severe convulsion general in character. He was immediately taken to the operating-room, anesthetized, and the head shaved and sterilized. There then appeared to be a distinct depression at the posterior portion of the left parietal region. The scalp was turned back; the skull under the wound was sound and what appeared to be a depressed fracture turned out to be merely a normal depression in the bone. No opening was made in the skull it being considered better to try and find out later, if possible, by some localizing symptom where to apply the trephine rather than to operate without any guide to the seat of the hemorrhage which was suspected in this case. The wound in the scalp was closed. The patient returned to the ward and made an uninterrupted recovery, having no return of his cerebral symptoms and left the hospital in two-weeks' time.

In most cases of compound depressed or comminuted fracture, the diagnosis is apparent both to the touch and in many instances

to the sight, though even here the original wound must in some instances be enlarged to determine the extent of the injury.

When a condition of compound fracture of the vault or lateral regions is determined, I think the general practice of all surgeons is to operate. Simple fissures must be converted into grooves to allow of drainage toward the exterior of the skull and to prevent infection of the cranial contents by particles of hair or other foreign or septic materials that may become lodged in such fissures. Depressed and comminuted portions of bone must be elevated or removed as the case may require, and this too, as soon as possible. That it is wise to do so these two following cases will illustrate.

A patient referred to Dr. Hopkins for exploratory operation presented the following history: Male, aged twenty-six. For the last sixteen years has suffered from convulsions. These convulsions had become more frequent in the last four years until at the time of operation he had from six to eight a day. At four years of age the patient fell from a second-story window and sustained an injury to the head over the left parietal region. He recovered perfectly soon after his fall without any surgical interference and for a period of six years appeared to enjoy good health. Then the convulsions came on, at first infrequent, but increasing in frequency and severity so that as before stated they occurred from six to eight times daily. Examination of the head revealed an extremely tender soft spot at the site of the old injury, pressure upon it causing intense pain and convulsions. The patient was anesthetized, a flap of the scalp raised fully exposing the injured skull, and there was found to be complete absence of the bone over a triangular area of about one-half a square inch. The dura was incised and a cyst about the size of a walnut found occupying a position in the brain directly under the external wound. The fragment of bone that was detached from the skull could nowhere be found.

An attempt to remove the cyst wall was abandoned on account of the hemorrhage and it was merely opened and drained. The collapsed cyst and external wound closed completely in about four weeks' time and the patient was free from convulsions for a period of six months. They then returned but were not as frequent as at the time of operation.

The second case was that of a little girl, six years old, that was brought to St. John's Hospital two years ago with a compound depressed fracture at the junction of the right parietal and

occipital regions due to being kicked by a horse. She was unconscious when admitted but had had no convulsion. The fracture was plainly visible and the brain fully exposed, in fact, a small amount of brain tissue had escaped through the wound.

She was taken to the operating-room, the scalp wound enlarged and a fissured depression fully two inches square exposed to view with some of the fragments down beneath the sound borders of the unbroken bone.

Some of these fragments were removed, others elevated, the wound in the dura was partly sutured as was that in the scalp, the remaining portions being drained with iodoform gauze.

The next morning she was perfectly conscious, complained of no pain or discomfort, and left the hospital with a perfectly healed wound and without any cerebral symptoms in three weeks' time.

From these two cases I cannot help drawing the conclusion that had the first been subjected to operation at the time of injury and the fragment of bone removed, he would have been far less likely to have had the subsequent cerebral trouble that did occur. It has also been always a puzzle to me how he could have escaped showing any symptoms of his intracranial lesion for six years after the injury.

I have records also of five other cases of depressed fracture of the vault with four recoveries and one death, the latter being a case in which nearly the whole vault was torn off by a heavy beam, falling on a boy's head while he was gathering wood in a lumber-yard. This case died about six hours after the injury.

Of the remaining four, one, a boy of twelve, had a superficial abscess form about six weeks after the wound, compounding a fracture of the vertical plate of the frontal bone, had healed. The abscess was opened, a small sequestrum removed, the cavity packed with iodoform gauze and recovery followed. His injury was received four years ago and last month he was as well as ever.

The diagnosis of fracture of the base, exclusive of its probability from associated cerebral symptoms, rests for the most part upon three signs: (1) Hemorrhage from the ears, nose, or mouth; (2) escape of a watery discharge and brain substance, and (3) paralysis of one or more cranial nerves.

Hemorrhage following a head injury and coming from the ear is not in all cases due to fracture of the base, and to be diagnostic of such a fracture, it must be profuse and long-continued.

Its source, according to Park, can be either from the internal carotid, transverse sinus, or middle meningeal artery. It can also come from laceration of the vessels of the pia mater and the brain itself. That blood from these sources can escape from the external auditory meatus there must be a fracture of the middle fossa traversing the petrous bone, opening up communication with the tympanic cavity and rupture of the drum membrane. Blood can also escape from the external anditory meatus from rupture alone of the membrana tympani, its source being the torn vessels of that membrane.

Ecchymoses occurring after injury to the head are also of diagnostic import. Two cases have come under my observation in which this sign was present.

The first was that of a male, aged fifty-four, who was knocked down by a blow from a man's fist received on the forehead. As the patient fell he struck the back of his head on a marble floor. Witnesses of the assault asserted later that when the head struck the floor, there was a distinct cracked-pot sound heard, and this was so plain as to cause one of the company to say, "he had cracked his nut." In this case ecchymosis appeared on the second day under the upper portion of the right ocular conjunctiva and then under the lower portion. There was no bloody infiltration of the lids. This patient fully recovered and resumed his vocation, the practice of law, in six-weeks' time. He has had no subsequent trouble with his head and the injury occurred two years ago.

In the second case ecchymosis came on two hours after the injury, being confined almost entirely to the lids there being very little blood under the ocular conjunctiva, the patient dying six days after the traumatism was received.

The escape of a watery discharge from the ear has long been considered pathognomonic of base fracture, but to prove that it is cerebrospinal fluid, it must fulfil certain conditions, be considerable in amount, of low specific gravity, contain considerable amount of sodium chlorid, and only a trace of albumin. By these latter qualities it is distinguished from blood-serum, while its large amount indicates cerebrospinal fluid rather than liquor cotunnii.

Additional evidence of fracture of the middle fossa would be its appearance soon after the injury and its being influenced by coughing or sneezing. Of the paralysis of cranial nerves, those most commonly affected are the facial, optic, and olfactory.

Treatment in base fracture seems to be of little avail aside from appropriate measures to combat the shock and prevent subsequent sepsis when the fractures are compound. In direct fractures of the orbital plate of the frontal bone, the fragments have been removed and the cranial cavity drained through the orbit. Also there are cases on record of like operative interference with recovery, in direct fractures of the cribriform plate—access to this portion of the base and the subsequent drainage taking place through the nasal cavity.

That patients sustaining extensive base fractures usually die is too well known to need comment, but in the future it is not impossible that the results of surgical interference will be more gratifying than at present.

In gunshot wounds of the skull the principal interest, besides treating the condition of shock and concussion which is usually severe in these injuries, lies in the recovery of the bullet and preventing sepsis. There is always comminution of the inner table and these fragments should be removed. Where there is no wound of exit how great a search should be made for the bullet, if it does not lie near the wound of entrance, is a problem, which as yet has not been settled. Should there be a prominence found on the skull opposite the wound of entrance, the scalp can be raised and the trephine applied, but when there is no such valuable sign and no localizing symptoms, it is probably better to leave the case alone unless a probe inserted along the bullet's path detects the ball itself. Probably the best instrument for this purpose is the graduated pressure brain probe devised by Dr. Fowler which readily shows whether the operator is in the path of the bullet or penetrating the substance of the brain itself.

Remarkable courses taken by bullets in gunshot wounds of the head are common and the following case, admitted to St. John's Hospital about eighteen months ago, serves as an example. The wound of entrance was received in the right parietal region and at the autopsy two days later the path of the bullet was traced across the skull to the left side, then through the base of the middle fossa downward through the neck and into the chest, wounding in its course the trachea and esophagus. The ball itself could not be found.

A second patient was found by the police in a cellar last January with a bullet wound in the centre of the vertical portion of the frontal bone, made by a 32-caliber revolver. The amount of shock caused by this ball was remarkably slight

and the patient soon reacted well from that condition. A probe passing along the path of the bullet, went entirely through the cranial cavity abutting on the inner surface of the occipital bone just above and a little to the left of the external occipital protuberance, but could not detect the bullet itself. The visible splinters at the wound of entrance were removed and the wound itself drained with iodoform gauze. Strange to say, this patient recovered perfectly, physically, but his mind is decidedly unbalanced. An attempt made later to discover the bullet by the Röntgen-rays proved futile.

Such cases as these serve to illustrate the uselessness of prolonged search for bullets in the cranial cavity; and the latter case, recovering with the ball still in the body, causes doubt to be expressed in regard to the value of operative interference further than removing fragments of bone, checking hemorrhage, and trying to combat sepsis when the bullet itself is not within easy reach.

DISCUSSION.

Dr. G. R. Fowler said that in cases of fractures of the base of the skull it has been his habit to institute thorough cleansing of the nasal cavity and of the ear as well, and packing the same with iodoform cotton or gauze. These are methods of treatment referred to in the paper which we might well notice.

In the matter of gun-shot wounds of the head, there are some curious instances recorded of toleration by the cranial cavity and its contents. Foreign bodies have been tolerated in the skull for a great while, and often the manner in which they have gained access is extraordinary. No visible signs of access may be present. There is a case recorded of a man who died with symptoms of inflammation and abscess at the base. The autopsy revealed the presence of a pen staff with a metal holder of a pen attached. There was absolutely no injury to the skull that could be discovered anywhere, and to this day it remains a mystery how this peculiar foreign body found its way through the base and into the cranial cavity, where it was lodged and remained there a number of years. The wife of the patient had no knowledge of her husband having received any injury whatever, and she had been married to him and knew all of his movements for several years.*

The question of the propriety of searching for bullets in gunshot injury to the head is one that should receive careful consideration. The speaker thought under all circumstances a trephining

* See *Medical Press and Circular*, January 18, 1895.

should be done or at least a portion of the bone removed at about the opening of the entrance of the bullet, and the brain and dura immediately underlying examined. There should be careful search for pieces of bone. It is a fatal error sometimes to leave portions of bone in such cases. As to proceeding further than this one should be guided by circumstances. It sometimes happens that the bullet is found in this procedure. In case it is not found within ready reach, the track of the bullet itself may be explored by the graduated pressure bullet-probe, or any other device whereby one may be certain one is not doing damage by crowding the probe into the brain tissue. A certain amount of pressure is necessary to pass between the convolutions or into the cerebral tissue. This pressure can be easily registered by the probe referred to so kindly by the essayist as bearing Dr. Fowler's name.

The question of deflection of the bullet should always be taken into account as well.

The question of searching the brain with blunt and rather fine needles for the purpose of demonstrating the presence of the bullet itself, may be discussed profitably, as well as the question of the application of Röntgen-rays, or the Röntgen-rays in connection with the telephonic bullet-probe. In connection with the subject of searching for a bullet with a telephonic probe in connection with the findings of the Röntgen rays, this has been done, the latter having approximately determined its position; the bullet-probe with the telephonic attachment finally located it. This was done in a case of the speaker, and he believed it was the first case in which a bullet was located by the Röntgen-rays.* The credit, however, was not entirely due to the Röntgen-rays, inasmuch as the telephonic probe was likewise called into use.

As to the use of large doses of opium, advocated by one of the speakers; while enough morphia or opium may be given to bring about moderate sleep or perhaps quiet restlessness, it is questionable whether the bringing of a patient into a comatose condition with opium, and keeping him there until he either dies or recovers, as has been suggested, is ever done as a method of treatment. The speaker could not endorse even the trial of such a palpably unwise procedure.

Dr. C. H. Goodrich said: Regarding the prognosis of cases of fractures of the base of the skull, that he believed most of the text-books and most of the articles we read in the journals agree

* See The Brooklyn Medical Journal, page 753, December, 1896.

with the reader of the paper. It had been his fortune, however, to find that the last five cases which had come under his observation have recovered with hardly more than expectant measures having been used.

As regards the cleansing of the nose and ears when an extensive fracture of the base is diagnosed, the wisdom of irrigating is denied by Curtis of New York. He thinks the possibility of washing foreign substances into the cavity is very probable, and when it has been done a meningitis has been caused and death has resulted. Of the five case reported which recovered, three were treated with simple gauze packing, and there was no irrigation of the nose or ears practised.

Dr. G. R. Fowler added that he did not have in mind active irrigation, but simply the employment of simple methods of cleansing and packing with gauze.

Dr. H. B. Delatour said that he had seen a great many cases of fracture of the skull, and that he believed, as Dr. Goodrich had stated, that the mortality is placed entirely too high and that packing the nose and ears is a measure which tends to lessen the mortality. Another thing we must take into consideration, is the involvement of the frontal sinus. In cases in which the frontal sinus is involved, we have a higher mortality. In compound fractures of the vault the mortality has been very low, but where the frontal sinus has been involved the mortality has been higher.

YEAST BACTERIA IN THE STOMACH.

BY R. L. GRAHAM, M.D.

Read before the Medical Society of the County of Kings.

In my researches into the various medical works on pathological conditions of the stomach it has never been my good fortune to see emphasized the pathological importance of yeast bacteria in the stomach. Boaz and Ewald speak of them as being present in certain conditions of the stomach, but put little or no diagnostic value on their presence. Jaksch, in his work on "Klinische Diagnostik," says that active yeast-cells are often found in the contents of the stomach, in the feces, the urine, and vaginal discharges.

In my practice I have become impressed with the great ele-

ment these bacteria play in dyspepsias and will endeavor to put forward some observations I have made concerning the same.

Of the cocci from which yeast-cells are formed we have very little knowledge, save the physical fact that under conditions of perfect dryness they will remain dormant for years, but when placed in a proper medium will become active, and in a short while will develop into yeast-cells. Bücheler speaks in his treatise on "Branntwein Industrie" of several varieties of yeast, but states that only one variety, the saccharomyces, possessed fermentative properties on sugar. These saccharomyces are the variety used for fermentative purposes, and are the variety we find in the stomach.

We have all, in our bacteriological work, become familiar with those round cells, found in pairs, or lines, and our earliest chemical training has taught us that yeast-cells, plus grape sugar, equal alcohol, plus carbonic-acid gas.

The first question to be answered is: Are yeast-cells normally found in the stomach? My experience satisfies me they are not, though I have found yeast-cells in a comparatively normal stomach; that is, where there has been no organic lesion present, and the stomach contents showed free hydrochloric acid. In a series of cases, I observed after washing out the stomach and keeping the patient on a cooked meat and vegetable diet, I was unable to find any yeast-cells present in the stomach contents. The process of cooking the meats or vegetables having killed any yeast-cells that might possibly have infected the surface of either, destroyed the means of infecting the stomach.

The next question that suggests itself to me is: Is the normal secretion of hydrochloric acid sufficient to destroy the activity of the yeast-cells in the stomach? Boas, Ewald, Rosenheim, and others agree that HCl. has a disinfectant as well as a digestive property. While this is undoubtedly true as relates to most bacteria, yet yeast-cells are the exception, as their activity is greatly increased in an acid medium. Maercke and Bücheler, two noted authorities on the manufacture of alcohol, advise the fermenting mass to be kept acid by the addition of hydrochloric or sulphuric acid. Yeast-cells are dormant in a strong alkaline medium, and are only active in a neutral or acid medium. This accounts for the inactivity of yeast in the intestine.

While working in Boas' clinic I observed a number of cases where yeast-cells were found in abundance, and the tests showed free HCl. A few weeks ago I had in my practice a case that will

illustrate this very nicely. Mr. A., a ferry-master in one of our New York ferries, was being treated by me for subacute gastritis. After being treated a week, examination showed free HCl. in a trial breakfast of a whole wheat biscuit, but I failed to discover any yeast-cells in the contents. The next day he took a lunch of bread sandwiches to work with him, and after eating the same began to experience a distress and fulness in the stomach. His distress was so great that he came to my office and insisted on having his stomach cleansed. Large quantities of gas escaped from his stomach during the process of cleansing, and the vomit showed free HCl. and large quanties of yeast-cells. I added some moistened bread to the vomit and fermentation continued until the next day, when I threw the mass out. The patient stated that the bread in the sandwiches was stale, and had tasted slightly sour.

In what way do yeast-cells infect the stomach? The most common way is by eating baker's bread. In order to save time and to make the bread light, bakers, as a rule, add much greater quantities of yeast to the dough than do our housewives. Then again, they do not give sufficient time for the bread to rise, as the fermentative process of yeast is a self-destructive one. The old-time fashion of letting the bread rise over night is no longer the rule. This incomplete fermented dough is put into a hot oven and a hard crust almost immediately forms which prevents sufficient heat reaching the heart of the loaf to destroy the yeast-cells lying there. I have repeatedly broken open a loaf of baker's bread four or five days old and found it sour at the heart. Moisture is an element necessary for the activity of yeast-cells, and yeast which will be dormant in dry bread will be active in a moist stomach.

Fresh wines and grape juices contain active yeast-cells, and the so-called unfermented wine is another medium by which yeast-cells are introduced into the stomach.

Of late the so-called home-made root beers, in which a solution of yeast is added, is still another way of introducing yeast-cells into the stomach.

In what way do yeast-cells affect the contents of the stomach? The early digestion in the stomach is diastatic, that is, the ptyalin converts the granulose of cooked starch into sugar. This conversion of starch has various stages. In the alkaline medium of the saliva we have the starch converted into erythrodextrin and into achroodextrin, but in the acid medium of the gastric juice we

have the dextrins converted into maltose. Maercker, in his treatise on "Branntwein Industrie," says that the presence of yeast changes all sugars in a mineral-acid medium into glucose. Thus, we have the dextrins and maltose converted into glucose in the stomach.

This glucose is readily attacked by the yeast bacteria, as here we have the most favorable conditions for their activity, namely, moderate heat, moisture, and acid medium. The glucose is changed into alcohol and carbonic-acid gas, with minute quantities of lactic acid.

The symptoms produced by this fermentation are indeed common among our American people. The feeling of fulness in the stomach, gradually coming on after meals, and relieved when the patient has been able to belch up gas, is undoubtedly due in a vast majority of cases to the presence of carbonic-acid gas formed by the fermenting mass.

The drowsiness and languor after meals is due somewhat to the absorption of the alcohol formed in the decomposition. While the sourness of, and burning sensations in, the stomach, so often complained of, are to a certain extent due to the presence of lactic acid.

I will here cite a case:

Mr. C., a carpenter, living in a furnished room and taking his meals in a restaurant, applied to me for treatment. Before his wife's death, which had occurred a few months previous, he experienced no distress in his stomach. Shortly after her death he began to suffer from fulness in the epigastrium after meals, which gradually increased till it became distressing. Likewise, he suffered from drowsiness after meals. The more severe his distress in the stomach was the sleepier he became, till he claimed after eating a hearty meal he must have a nap.

Examination showed position of stomach normal; no marked tenderness on pressure. HCl. present in the trial meal, and no perceptible atony of the muscularis. Abundant yeast-cells were in the stomach contents.

His wife had been a great cook, he claimed, and always made her own bread. I washed his stomach out with a mild solution of resorcin for several days in succession and cut yeast bread out of his diet. On his last visit he stated that while he slept less at night, yet he was bright throughout the day, and suffered no distress from his stomach.

It would seem as though the process of baking was sufficient

to destroy all the yeast-cells in the loaf. Undoubtedly in a slow fire, and in a loaf of small circumference, the bacteria would be completely destroyed. The French cooks seem to have this idea, for, instead of making their bread of a brick or circular shape, as we usually do, they make their bread of a thin, cylindrical shape. It is a common sight to see in the bake-shops of Paris the loaves of bread from four to five feet long, and of a diameter from four to five inches. By lessening the thickness of the loaf they enable the heat to more thoroughly reach the heart. Again, these loaves are baked in separate pans, not as our American bread is made, that is, from six to ten loaves together in a pan, which adds to the protection of the yeast-cells in the center loaves.

The treatment consists in the removal or destruction of the yeast-cells in the stomach, and the prevention of reinfection.

When it is possible to do so, repeatedly washing out the empty stomach for several days in succession is the best means to secure the removal of these cells. Plain water or a weak antiseptic solution may be used, but the washing should be more thorough than in other pathological conditions of the stomach. However, we frequently meet patients who will not be persuaded to submit to having their stomachs washed out, yet they present all the symptoms of yeast infection. The bichlorid of mercury in $\frac{1}{25}$-grain doses, given on an empty stomach, three times a day, will be found very efficient. In a case recently treated by me I met with good results from its use. Mrs. O. S., aged fifty, widow, of good means and living in luxury. General health fair; could discover no organic lesions save flabbiness of the abdominal wall, with no marked tenderness over the epigastrium. She complained of distress, a fulness in her stomach, a drowsiness after meals, and a continuous belching up of a sour gas. She absolutely refused to have her stomach washed out, so the diagnosis in this case had to be founded on a probability. She gave a history of tea and bread being her principal articles of diet.

By putting her on a liberal meat and vegetable diet, and prescribing large doses of HCl. with hydrag. bichlor. I was able to afford her much relief. Like many women of her temperament she could not be restrained in her diet, and would occasionally eat bread, which would cause a return of the distress, but the former medication would always succeed in relieving it.

To prevent the reinfection of the yeast bacteria in the stomach we must find some substitute for baker's bread in the diet. Where it is possible to do so, have the patient eat home-made

bread that has had at least twelve hours in which to rise. Whole-wheat biscuit, or shredded-wheat biscuit, is probably the best substitute at the beginning of the treatment. These have the additional benefit of being slightly laxative. Aerated bread is certainly good, but I always insist on its being toasted, or stale. Graham crackers or wafers have been tried, but I cannot recommend them. Among the Scotch and Irish people we have what is called "bannock bread," which consists of oatmeal and flour moistened and patted into cakes and baked in the oven, which is to be recommended in these cases, especially when accompanied with atony of the muscularis of the stomach and bowels, it is quite effectually laxative. The substitution of baking powders for yeast in making bread is to be advised.

Undoubtedly the majority of dyspeptic cases where yeast fermentation exists are complicated by other pathological conditions, yet these conditions are certainly aggravated by this fermentation, and much relief will be afforded by checking the same. I have seen quite a number of cases where I have cause to believe the entire trouble was due to yeast fermentation, and other cases where the yeast fermentation has been an important element in the disease.

DISCUSSION.

Dr. E. H. Bartley: Mr. Chairman, the whole subject of yeast fermentation in the stomach and intestine has been exciting a good deal of attention of late years; in fact, much more in recent years than formerly, and I believe that its importance is being more and more appreciated.

There is very little literature upon the subject of the effect of yeast fermentation in the stomach, or the alcohol ferment, more properly. That such a fermentation does take place is not doubted, and it has been known. If we ask ourselves how the symptoms outlined in the paper are produced by yeast fermentation, we meet with some difficulties in making answer. In the first place, the small amount of active yeast-cells themselves can hardly be regarded as the morbific agent, and the amount of alcohol that can be produced, or is likely to be produced, in the short time between the meal and the time when the distress is felt, seems very small. Alcohol is not produced rapidly and in large quantities by the small amount of yeast that is usually found in the stomach. The amount of alcohol, of course, it would be difficult to determine, but it certainly cannot be as much as would be obtained from a glass of beer, and if the alcohol were the cause of

the symptoms then we ought to get those symptoms whenever we drink a little claret, or a glass of beer, or some other very mild alcoholic during our meal or immediately after. The sleepy spell that is outlined in the paper is complained of by patients, and I think at times when there is none of this fermentation. The question then is: What else could produce this train of symptoms? Certainly we might possibly have a little distension of the stomach from carbonic acid, but the amount of carbonic acid that could be produced in one-half hour or one hour—the time that usually elapses between the meal and the appearance of the sleepy feeling—would not be sufficient to distend the stomach to a very large extent; and then we notice that in certain diseases of the stomach in nervous persons—we will call it nervous dyspepsia—we have an immense quantity of gas without this sensation of fulness and sleepiness. We have in some cases this immense volume of gas where antiseptics give no relief; so that the dilatation of the stomach can hardly be put down as the cause of such sensations. The yeast itself only produces, so far as I know, alcohol, carbonic acid, traces of higher alcohols, succinic acid, and a few other very minor side products, but these are produced in such small quantities that they can hardly be regarded as the cause of any such symptoms. Lactic acid and butyric acid, both mentioned in the paper, as I understand it, as accompanying the yeast fermentation or complicating it, it seems to me are more liable to produce the heavy sensation, the localized sensation, but they do not account, I believe, for the sleepy feeling. In fact, I have been very much puzzled to know the cause of that peculiar manifestation. I have experienced it myself, and it is sometimes almost overpowering, and I am sure that it is the result of some kind of fermentation. I have always regarded it rather as a result of lactic acid than from yeast fermentation. I may, however, be all wrong in that. It is produced most readily by acid fruits; for example, such things as apple sauce and preserves, and in these cases there is usually present more or less invert sugar. Now, whether that has anything to do with it I do not know. We all know the distress that is produced by eating fresh, underdone bread—doughy bread—but we have usually attributed that to the fact that the dough mashes together and so forms a solid lump, which is not easily disintegrated, and acts as a foreign body and irritant upon the membrane of the stomach. According to the light of this paper, perhaps that is due to yeast fermentation as well; and the question comes up as to what in baker's bread will

produce the rapid fermentation? I think there can be perhaps some question as to whether it is due to fermentation of the glucose formed by the saliva in so short a time. The principal object of the saliva is to liquefy the contents of the stomach and convert it as far as dextrin, but I doubt that in the first half-hour of digestion, at least, whether very much glucose is formed in the stomach—possibly a little, but mostly dextrin and maltose, neither of which readily ferments with the yeast. The maltose is usually inverted, or converted into simpler sugars before fermentation takes place, and it has been claimed that all the starch is converted in the stomach into either dextrin or maltose. That is disputed, and I know I have often found insoluble starch in the contents of the stomach in fairly normal digestion. But the explanation of why we have such a train of symptoms from the little fermentation which can take place within one-half to one hour after a meal is not at all clear.

I think that this paper is a valuable one, because it brings to our attention a subject that is not much spoken of. I think that further studies in this direction will lead to something perhaps more positive than we have heretofore had on the effects of yeast fermentation in the stomach.

Dr. R. G. Eccles: I was very much interested in the paper which Dr. Graham read us, particularly in the symptoms that he described as being produced by yeast fermentation. It is entirely new to me and I am not yet satisfied that he is correct. In thinking over some of his statements it occurred to me that if there were yeast-cells left after the bread was baked through and through, so that it was at all edible and not coming out dough, it would seem to contradict the experiments of bacteriologists, who find that if kept at a temperature of 65 C. for but a short time the non-sporing germs are all destroyed, and the temperature is very much above that or the bread would never bake; hence, it does not seem at all rational to me that there should be any yeast-cells in bread, no matter how the baker baked it, provided it was baked through and through. If there are yeast-cells left, then the bacteriologists are mistaken. Again, the gentleman did not point out the possibility of the stomach containing millions of yeast-cells from their natural source. Everybody is swallowing them when they eat grapes, for the grape is covered over with yeast-cells. From this source would come far more than he would be likely to get in all the bread he would eat. I cannot understand why it is that in grape-growing countries, where many millions of grapes are

eaten, that this trouble should not be very prevalent. Again, my mind reverts to the experiments made during the last two years in Germany and that have been appearing in the German literature for some time, wherein for the cure of diabetes they have given large quantities of yeast, piling it in in abundance so as to ferment the whole intestinal tract through and through. They say they find it very successful treatment. If that is so, I cannot understand how the gentleman's claims can be sustained.

Another difficulty arose in my mind. Physiologists have been showing that ordinarily there is scarcely a trace of dextrose produced in stomach digestion if it is normal. It is only when an excess of sugar is used, when the pylorus refuses to act, and when the stomach refuses to disgorge its contents, that not the hydrochloric acid alone, but the mucus of the stomach itself inverts the sugar and produces large quantities of dextrose. Dextrose does produce alcohol and carbonic acid when present in the stomach and fermented there, but nothing like as much ot the gas as a man would take in a glass of soda water, and nothing like as much alcohol as he would be likely to take when he goes to a fountain where a wink would bring the other beverage; so that the symptoms described as due to that cause seem to me to be entirely astray. When we eat our food the saliva contains ptyalin that acts on the starchy particles of the food; various dextrins are produced, and maltose, or malt sugar, but no dextrose. Maltose, Dr. Bartley said, was very little acted upon by ferments to produce alcohol. As I understand the matter, it is scarcely, if at all, acted on in this way until reduced. There is another ferment present in small quantities in the saliva called glucase, that does act upon the maltose and reduces it to dextrose, but it is present in such minute quantities that one has to take large amounts of saliva outside the body and act with it upon starch for three or four hours before one can find enough to be sure of its presence. This ferment, however, acts in the intestines and in the blood, so that it performs a function that is very useful to the organism. In the act of digestion the muscular coat of the stomach near the pylorus produces a rotating movement of the food, the starch, after being converted into soluble ingredients, is forced through the pylorus. Little if any of it goes through the walls of the stomach. There is normally no accumulation; it does not remain to ferment; it enters the duodenum where it is acted upon in ways that are now being carefully studied. The latest reports are from William Pavy of London. He has brought forth some very re-

markable experiments in which many of our old notions seem to be refuted. He has shown that the quantity of maltose produced from starch is very much less than heretofore believed. The dextrins, he tells us, are converted into fats by the action of the villi of the intestines. It is surprising; I do not understand it; I confess I cannot see the chemistry of it, but experiments, he says, declare it to be true, for he has found that by feeding rabbits only on carbohydrates fat was actually produced in the intestines, and appeared in the thoracic ducts and lacteals. A large proportion of the starch is converted, he says, into fat and is carried into the blood as fat and not as sugar. He further shows that even that part which is converted into sugar passes through the portal circulation to the liver, where it is arrested in the form of glycogen, or animal starch. In this condition of animal starch (glycogen) it is next converted into fat; so that the final product of digestion of the carbohydrates, according to Pavy, is fat and not sugar as we have heretofore supposed. The combustion in the body would appear according to this to be the combustion of fat and not of sugar. As practical experiments and not mere theory, his claims are opposed to the theories we have heretofore held.

Now, when we look at these facts and consider them, it is difficult to see how any such changes as the gentleman declares are produced in the stomach could at all be produced. It is certain, however, that he must be mistaken in his statement, if I understand him aright, wherein he claims that the yeast ferments (the saccharomyces) produce acetic acid. The saccharomyces produce alcohol; then the alcohol is acted upon by the acetic ferment to produce acetic acid or vinegar. It requires totally different ferments to produce these two substances.

Regarding the production of lactic acid, I would say that it can be produced where there is a small amount of alcohol. The gentleman who followed Dr. Graham gave us to understand that lactic acid could not be produced in the presence of alcohol. Some time ago I had the honor to be sent by Messrs. Merck & Company to Hamburg, Germany, for the purpose of studying an industry founded on this fact. Lactic acid was produced at the same time that the alcoholic ferment was present.

Dr. Graham: What I wished to show in citing that case was that this bread contained active yeast-cells, but the bread being thoroughly dried the yeast-cells were inactive; but in the moist stomach where they were under conditions advantageous to their activity the yeast became active and the incomplete fermentation

continued, and the symptoms were produced by the fermentation of the bread in the stomach.

I think Dr. Eccles exaggerates in his statement the great quantities of yeast-cells that enter the stomach. That the cocci from which the cells are formed exist freely in the atmosphere and on skins of fruits, such as the grape, is a well-known fact, but I doubt very much if the fully developed cell will be found in the atmosphere or in the unfermenting fruit. Yeast has a greater specific gravity than water, which fact would prevent its freely circulating in the air. Experiments have shown that in a proper medium it takes from three to ten days to develop the cell from the coccus, and I think this development could hardly take place in such a medium as a comparatively normal stomach. Again, as Dr. Fuhs says, yeast-cells are not a constant factor in the stomach contents, and were they admitted in such quantities and through such media as the Doctor would have us to believe, they certainly would be a constant element.

Alcohol, even in small quantities, produces drowsiness in certain individuals. I myself have experienced drowsiness after drinking a glass of Rhine wine, and I believe there are cases where the formed alcohol is a factor in the cause of drowsiness after meals. Fermented beers and wines contain, as a rule, few or no yeast bacteria. The process of clarifying and filtering removes most if not all the cells present, while any solution that is five per cent. alcohol will prevent the cocci being converted into cells in this medium. Our beers and wines usually contain a greater per cent. of alcohol than that.

MEDICAL CORPS OF THE UNITED STATES ARMY.

An Army Medical Board meets in Washington during the month of May for the examination of candidates for appointment to the Medical Corps. Application must be made to the Secretary of War before April 15th, giving date and place of birth, place and State of permanent residence, the fact of American citizenship, the name of the medical college of graduation, and a certificate of hospital service; and all candidates must be between twenty-two and twenty-nine years of age. Successful candidates will be given a course of instruction at the next session of the Army Medical School, beginning in November. Further information may be obtained by addressing Surgeon-General Sternberg.

THE BROOKLYN MEDICAL JOURNAL.

Communications in reference to Advertisements or Subscriptions (Subscription Price $2.00 per annum) should be addressed: Business Manager, BROOKLYN MEDICAL JOURNAL, 260 Hancock Street, Brooklyn, N. Y.

Exchanges should be addressed: BROOKLYN MEDICAL JOURNAL, 356 Bridge Street, Brooklyn, N. Y.

Books for Review and Articles for Publication should be addressed: BROOKLYN MEDICAL JOURNAL, 173 Joralemon Street, Brooklyn, N. Y.

Remittances should be made by money-order, draft, or registered letter, payable to BROOKLYN MEDICAL JOURNAL, and addressed to Business Manager.

Authors desiring Reprints of their papers should communicate with Rooney & Otten Printing Co., 114-120 West 30th Street, New York, stating the number of Reprints desired, and the number of JOURNAL pages their papers will occupy, allowing 470 words to a page.

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EDITORIAL.

GEORGE McNAUGHTON, M.D.

The four years beginning with 1894 and ending with 1897 have been most notable in the history of the Medical Society of the County of Kings. During this period the membership has increased from 429 to 600; the library, which in 1893 contained 7000 volumes, now contains 13,000; and the change from a home which has become cramped and inadequate to one which not only meets the wants of the Society but will be an ornament to the city is assured.

While it would be exaggeration to say that these evidences of unusual growth and prosperity have been due to any one man, still it is not too much to say that with a less progressive man than President McNaughton at the helm the benefits enumerated might have been delayed many years. To his zeal, enthusiasm, and belief in the possibilities of the future for the profession every member of the Society and of the profession at large is greatly indebted; how great is that debt, time will show.

THE DR. JOHN LLOYD ZABRISKIE MEMORIAL ENDOWMENT FUND FOR THE LIBRARY.

The announcement of this, the first permanent endowment for the Medical Library, has been received with the warmest expressions of appreciation by the profession. The donor, Mrs. J. L. Zabriskie, can be heartily congratulated, not only on her noble choice of a purpose and her fidelity to medical tradition, but also, and scarcely less on the fact that she has *inaugurated* for Brooklyn the much-needed system of permanent funds devoted to the improvement of medical consulting facilities. Now that this object has once been recognized practically, there is no doubt that others will follow, and that if the profession does its part in finishing the structure already begun, the way will be opened to the realization of our hopes—a medical library worthy of our city and ranking with the first in the country.

We have books in storage, there are many more piled up on our floors, the shelves are crowded, our regular accessions are ever on the increase, and here come the funds to broaden out properly. *What are you going to do about it?*

It is time every man in the profession fell to, and, with pride in our opportunity, gave his tithe and then went out with fire and cajoling syrup to drum up more, that we may house and somewhat adequately care for our treasures. There are none too poor to do something, none too solitary to influence help from others. In this way can we best show our real appreciation of this gift from Mrs. Zabriskie.

DISPENSARY BILL.

In another part of the JOURNAL we quote at length the new bill which has been introduced into the Legislature of the State of New York, intended to correct the abuses connected with dispensary management. Since its introduction much opposition has been manifested to its passage, and petitions are being extensively circulated in the various boroughs of the city for the signatures of the profession asking the Legislature not to pass the bill. The principal objection urged by its opponents is to the provision by which the granting and revocation of licenses to maintain dispensaries are placed in the hands of the State Board of Charities.

HEALTH BOARDS AND THE SALE OF ANTITOXINS.

Besides the agitation connected with the attempts to correct dispensary abuses, the medical profession is at the present time discussing the propriety of health boards selling antitoxins, and a bill has been introduced in the Senate of the State of New York to prohibit the City of New York from continuing the practice.

As in most questions, so here there is undoubtedly much to be said on both sides. The health authorities claim that were it not for the profit made on antitoxin the funds appropriated by the Board of Estimate would not be sufficient to maintain their laboratory, and the valuable scientific work there done would come to an end. We have been informed that this profit for the year 1897 was $40,000. The opponents of the practice claim that the city has no more right to sell antitoxin or vaccine than to sell quinin, calomel, or any other drug. That a supervision should be exercised by the health authorities over the quality of articles sold by manufacturers is recognized by them, but further than this they claim the city should not go.

Whatever may be the present status of this question, there is no doubt but that when the virtues of diphtheria antitoxin were first proclaimed, had not the health boards undertaken to prepare and supply this remedy much suffering and doubtless many deaths would have resulted, but now that it has become a regular article of manufacture by reliable houses, it is a grave question whether this function of the authorities should not cease.

If the attitude of the medical press is to be taken as an index of the sentiment of the profession, this is in sympathy with the proposed measure which curtails the powers of the health board.

DIRECTORY FOR NURSES.

Our Society has a department called Directory for Nurses. It is fair to suppose from the manner in which it has been overlooked or lost sight of by many of the members of our organization that the above statement will be a revelation. As its name indicates it is established to direct—direct the physician to the nurse, direct the nurse to the physician, direct the patient to the nurse. To be fully prepared to do this a list of competent nurses has been prepared. The names have been placed on that list because the owners' record has been examined and certified to by

competent physicians. The persons the department has to send out are guaranteed therefore. They are as well guaranteed as any in the city. By entering their names on this list they signify that their credentials have been produced, examined, and passed upon. There is a great advantage offered to the nurse by this directory.

Now let us examine what it offers to the physician. He can telephone at any time to the office, 356 Bridge street, and obtain a competent male or female nurse. He can obtain persons of the widest experience. He can rely on the nurse furnished him.

The Society has placed the office in charge of Miss E. K. Provost, who has had experience in this work for many years. She is always on hand and faithfully discharges her duties. We appeal to the members to support this important undertaking. While they will add to the income of the Society, by so doing they will be well served in an important part of their work.

If a nurse is wanted, telephone to 399 Brooklyn, or communicate with 356 Bridge street, or send the friends of your patient to advise with Miss Provost directly.

PROCEEDINGS OF SOCIETIES.

THE BROOKLYN SURGICAL SOCIETY.

Regular Meeting, November 4, 1897.

(Continued from page 118.)

H. B. Delatour, M.D., President, in the Chair.

PECULIAR CICATRIX FOLLOWING A BURN OF THE ABDOMEN AND THIGHS.

Dr. A. M. Judd presented a boy eleven years old who had been burned in a street fire when two years of age. The resulting scar almost defied description. It involved the thighs, external genitals, and abdomen. He said that he had not been able to find the testicles in this boy. The scrotum and penis could barely be discovered. When the boy was first seen he was bent over so far that he could hardly walk; but after treatment by massage the scars about the groins had sufficiently stretched as to permit of his assuming the upright position.

Dr. G. R. Fowler said this is an exceedingly interesting case. He thought the fortunate outcome of it thus far in overcoming the flexion of the thighs to be most remarkable; that the improved position had been maintained in this case is undoubtedly

due to the constant effort made to overcome the tendency to cicatricial shortening. In plastic operations designed to overcome these untoward results of burns, perhaps the most frequently neglected, and what has seemed to him most important, contributing, as it does, more than any one thing to a good result, has, in his experience, been the dissecting away of every portion of the cicatricial tissue. To fall short of dissecting out all the cicatricial tissue, even if this involves the laying bare of muscles, is to omit the *sine qua non* of ultimate success.

OVARIAN CYSTOMA; TWISTED PEDICLE.

Dr. A. M. Judd presented a specimen of ovarian cystoma, removed from a patient thirty-two years of age, on that day. For the past two years the patient had been suffering with backache and pains over both ovaries and running down the thigh. During the last two weeks the pain had been much increased. There had been no rise in temperature, but the patient had been in bed until she was removed to the hospital, and there kept in bed two days. The examination was almost negative. An exploratory laparotomy was done. The ovarian cyst was found covered by the omentum, which was closely adherent. Thirty-four ounces of fluid were evacuated. The cyst was twisted upon its pedicle six times, causing a strangulation of its vessels. The fluid contents of the cyst were dark-reddish in color.

Dr. G. R. Fowler said that this recalled a case that came under his observation three days before. The patient was sent to him with a diagnosis of ovarian cystoma. She was admitted to the Brooklyn Hospital. The physician had not seen her for three weeks, and at his examination he was able to make out a fluctuating, movable tumor in the right side of the pelvic cavity. When she was admitted the speaker had attempted to make an examination, but found a most extraordinary tenderness at the site of the tumor. She informed him that this had not been present when the physician had examined her. The tumor was then decidedly fixed and it was almost impossible to move it. In addition to this she had developed sudden acute pain in the right side during the preceding twelve hours, and a rise of temperature to 101° F. had taken place. The symptoms under these circumstances were rather puzzling. The physician who had first seen her was a very trustworthy observer, and it was difficult to doubt his diagnosis. The patient was taken to the operating-room and the abdomen opened. There was found a condition

somewhat similar to that presented by Dr. Judd, except that the twist was not complete. The pedicle was untwisted, ligated, and the tumor removed. This is the fifth case of twisted pedicle of an ovarian cystoma that the speaker had observed. Two of these came to the hospital with a diagnosis of appendicitis, and one with a diagnosis of intestinal obstruction. These cases are exceedingly interesting and they have been more frequently reported in the literature of recent years than formerly. The causes of the twisting have never been determined. The speaker thought it was Lawson Tait who suggested that in constipation of the bowels the lifting forward and rotation of the tumor upon the long axis of the pedicle might cause a twist of the latter, the direction of the twist depending upon which side the tumor was located. He did not know that this had ever been verified, but his recollection was that in all his cases the twisting had been always from right to left. These have all been right-sided cases. One feature of the cases he had observed had been the rather rapid increase in the size of the tumor after the twist had been commenced. This was probably due to edema and effusion following obstruction of the circulation in the pedicle.

Dr. J. B. Bogart said that he had once removed a tumor of the right ovary and the Fallopian tube with a twisted pedicle from a little girl thirteen years old, who had never menstruated. The ovary was about as large as an ordinary-sized orange, and the tube larger than his thumb. The color of the tumor was very dark, indeed. He had expected to find an abscess in the region of the appendix. There was in this case very marked infiltration of the pelvic diaphragm. The uterus was infantile and the case one of the most remarkable that he had ever seen. The tumor was laid open and found to contain nothing but blood, apparently, although the size to which the ovary had attained made it clear that there must have been a growth of some kind in it beforehand.

Dr. Wm. B. Brinsmade said that he would relate, briefly, a case in which he made a diagnosis of a large ovarian cyst, such as Dr. Judd has described, and advised operation. The patient passed out of his observation for six weeks, when she came to the gynecological clinic and told him that after her first visit she had made arrangements to go in the hospital, but during that night she was taken very ill with severe pains and a bloody diarrhea, and went into a state of collapse so profound that her friends despaired of her life for some days. The reporter found on ex-

amination that the large movable tumor was entirely gone and there was a mass in the posterior cul-de-sac. He believed that in this case the cyst became adherent to the bowel, ruptured at the seat of adhesion, and discharged its contents by the rectum.

Dr. J. P. Warbasse said that some three or four years ago he had operated upon a case which had been sent to the hospital for operation for appendicitis. The examination showed induration and tumor on the right side, with exquisite tenderness and fever, and all signs of appendicitis, with a suppurative process. This corresponded with the examination of the physician, who was a very careful man, and with the examination of the house surgeon. The tumor had the feeling of an ovarian cystoma. After the patient was under the anesthetic, examination of the right iliac region, where the tumor had been, showed that there was no tumor present. The tumor had shifted to the median line. He made an incision in the median line and came down upon a full, round tumor, which had a dark mahogany color. It proved to be a cyst of the ovary, somewhat larger than a fetal head, in which the pedicle was twisted from right to left, as Dr. Fowler had described. This cyst contained a bloody fluid from the rupture of the small blood-vessels in the lining of the cyst, and the infiltration of the cyst contents with the escaped blood. The speaker had made numerous microscopic sections of the cyst-wall, and discovered that the whole wall was the seat of multiple hemorrhages, infiltrating the tissues with blood. This had been due to the rupture of blood-vessels during the strangulation of the veins in the pedicle, while the artery remained patent. The interesting feature in these cases is the rise in temperature which has been noted in many of them, and operations have been done with a view of attacking some suppurative process. The temperature is probably due to the effusion of blood, and the absorption of the fever-producing blood-ferment.

VERMIFORM APPENDIX.

Dr. H. B. Delatour presented a vermiform appendix from a boy fourteen years of age, who had had four attacks of appendicitis occurring at exact intervals of six weeks. Each attack began very sharply with marked rise of temperature and excruciating pains, which went on for a few hours and then subsided. His fourth attack was nearly two weeks ago, and that attack lasted two days, when the rise of temperature disappeared. At the end of twenty-four hours the temperature was 101½° F. The

symptoms then subsided, and at the end of two days more he was found to be well, and up to the day of reporting was supposed to be getting farther and farther away from the attack. During the afternoon the speaker had operated upon him, presumably between attacks. The appendix was found very much enlarged, the surface of it as red as ordinarily found in an acute attack, and still there were no temperature and no tenderness. Another point in this case was the fact that the only adhesions which had taken place were between the very tip of the appendix and a portion of the omentum and this left an opening through which a coil of the small intestine could have become strangulated. The specimen was injected with alcohol, after the manner described by Dr. Abbe. Since this method was published the speaker had been using it to distend Fallopian tubes after extirpation, and he had been surprised to find that in a number of cases there were distinct strictures in the tube which would never be suspected from the outside. This had led him to believe that in many cases where there is pain the true lesion is not in the ovary at all, but in the obstruction of the tube. He recommended injecting the tubes in all cases after removal, the same as we would inject the appendix.

THE BROOKLYN PATHOLOGICAL SOCIETY.
THE 390TH REGULAR MEETING.

November 11, 1897.

The President, Dr. James P. Warbasse, in the Chair.

Program provided by Section VI., Dr. F. W. Wunderlich, Chairman, and Drs. Bayles, Brush, Chick, Emery, Gordon, Hunt, Koerner, McEvitt, Minard, Pierce, Risch, Skene, Sullivan, Wilson, and Craig.

PAPER: "NON-RESOLUTION IN PNEUMONIA,"

by Dr. H. F. Risch.

PAPER: "SPUTUM ANALYSIS,"

by Dr. T. C. Craig.

DISCUSSION.

Dr. E. H. Wilson: I would emphasize the necessity of using proper optical apparatus in examinations of the sputum. It is the practice with some physicians to depend upon a rather inferior

lens for this work. It is perfectly true that if the tubercle bacillus is properly stained and is present in moderate numbers in the sputum, it can be demonstrated with a good dry lens. It is equally true that if we failed to find them with the dry lens, we would not care to say that they are not there; in other words, a positive diagnosis is easy to make, but a negative diagnosis requires more care. In my opinion no sputum examination should be attempted with anything but an immersion lens of at least one-twelfth focal length and moderately good numerical aperture; a negative diagnosis is of as much importance as a positive one, and we want to be sure when we say the tubercle bacillus does not exist in sputum, that if they had existed we would undoubtedly have found them with the apparatus used at the time.

Dr. H. P. de Forest: Dr. Hodenpyl, in a paper read before this Society a year ago, called attention to the fact that a quick and convenient way to pick out small flocculi was to examine sputum in a Petri dish lying upon the cover of a black book. The black background shows these little white patches very well indeed.

If a centrifugal machine is used to concentrate the bacteria in sputum containing but few, it is well to remember that if care is not taken to place a fresh piece of rubber, corresponding to the cork, at each end of the papillary tube for every examination, it is not at all an impossibility that bacilli from a previous examination will remain at the end of the tube and give rise to an erroneous diagnosis. This little point is oftentimes overlooked.

As Dr. Wilson has said, a positive diagnosis is easy to be made, but I am not at all prepared to say that any of us can make a positive negative diagnosis; we can simply say that in a particular case we do not find the bacilli, but I do not believe that any of us can say, except as the result of inoculation experiments, that in the sputum of a given individual there are no tubercle bacilli present.

Dr. Wilson: I had only in mind the sputum under the microscope in that particular case.

Dr. Warbasse: The difficulty which the amateur usually encounters in preparing such specimens for examination arises from imperfect staining more than from imperfect lenses. Indeed, the amateur, through imperfect staining, will often be able to find the tubercle bacillus in non-tuberculous material; I have frequently seen such cases.

Professor Orth once called attention to the fact that the ordinary fat cell, with the nucleus crowded over to one side, if stained

after the ordinary carbol-fuchsin method and not sufficiently decolorized, the flattened nucleus will show the red stain and may easily be mistaken for a tubercle bacillus if one is not on his guard.

BRIGHT'S DISEASE: AN EXTRAORDINARY CASE,

reported by Dr. George H. Pierce.

In 1871, twenty-six years ago, the patient in question had an attack of illness attended with dropsy, and all the signs of nephritis. These external symptoms disappeared years ago, and since then he has enjoyed good health. At the time of the original attack the urine was examined and was found to contain both albumin and casts. These have continued to be present ever since, as has been found by insurance examiners upon several occasions.

Within a few months I have had occasion to examine him for a similar reason and found his present condition to be as follows: He is now fifty-three years old, and is the vice-president of a large manufacturing company. He is obliged and able to do a great deal of work, and does it with little fatigue. He is tall, of good muscular development, and with a fine presence. To all outward appearance he is the picture of health.

Examination of the urine showed that with Heller's test a ring one-eighth of an inch thick formed in fifteen minutes, and under the microscope there were found numerous hyalin and granular casts, studded with red blood-corpuscles and leucocytes. A considerable number of free hemacytes and leucocytes were also found. Epithelial cells were not very numerous, and were chiefly small round cells. His family physician has found the same conditions frequently, though the urine at times has been free from abnormal ingredients. An average of 45 ounces of urine has been passed daily; it has a specific gravity of 1018 to 1022, and contains 18 milligrams of urea in each cubic centimeter.

Another similar case seen recently is of interest. This is a young man, an athlete, cross-country runner, and golf-player. He seems to be in perfect health, yet the microscope reveals a large number of red blood-cells in the urine, which is of normal appearance and has a specific gravity of 1010 to 1020. Several years ago he had typhoid fever; possibly this was the starting-point of the hematuria.

Instances like these are of importance. We are accustomed to regard the presence of casts and of albumin in the urine as of the gravest significance and to regard the probable life of the person

so afflicted as a short one. The presence of blood in the first case may account for some of the albumin, but it is certain that there is diseased kidney tissue in one or both of the organs that has persisted for years. There must be enough normal tissue left to maintain his general good health, and he seems to throw off the casts and albumin with as little detriment as ordinary persons do epithelial scales from the skin.

These cases represent in the living those pathological conditions that after the termination of life we are accustomed to see presented in the rooms of this Society.

DISCUSSION.

Dr. J. M. Van Cott: I would like to ask if the heart in this case was examined?

Dr. Pierce: The heart was not examined. He came to me simply to have the urine examined to see what the condition was, and it was found to be so bad that further examination was not made.

Dr. Van Cott: The reason I asked the question was that the statement is often made that Bright's disease is generally a vascular disease. It depends entirely on what you call Bright's disease, whether that be accurate or not. There are certainly some forms of parenchymatous nephritis in which vascular lesions are not so evident and in which the heart lesions, which are synchronous with the vascular lesions, are not present.

With regard to the extensive degree of this condition, I was reminded of a case which came to autopsy in the Brooklyn Hospital three years ago, a man in good circumstances, apparently perfectly well, took it into his head to jump out of a window and commit suicide. That man's kidneys were absolutely riddled, they were the finest samples of mulberry kidney I have ever seen, and I was astonished that a man who had entered a hotel in a perfect state of health and had terminated his own existence by suicide could give such a showing of organs as he.

I quite agree with the Doctor that there are many conditions found microscopically in cases of suspected Bright's disease which would indicate a fatal termination, which are not really so significant. Cast material alone is getting to be of less and less importance in my judgment, for the reason that it is so often the expression of merely nutrition disturbance in the organ.

To me the Doctor's case is extremely interesting. Here is a man who is passing—I figured it up while he was speaking—402

grains of urea in twenty-four hours. It must be that here is a localized, or, as it has been called, a "patchy" nephritis, in which only certain areas of the organ are involved, the rest of the tissue retaining its functional activity.

I saw a case sometime ago in which Dr. Bull was induced to operate, and who died on the table much to the Doctor's disgust. The man had hematuria, but no symptoms indicating that he was suffering from uremia or renal disease. The right kidney presented a large mass, which was seen by Drs. Janeway, Weir, and Bull. Operation revealed a kidney that weighed three pounds and contained hundreds of cysts. He died of uremia, or shock or something, twenty-four hours after operation. Autopsy was refused, and the house surgeon in Dr. Bull's sanitarium in New York slipped his hand into the wound of operation and managed to palpate the other kidney and found a similar condition on that side. It was one of these cases of congenital cystic degeneration of the kidney. Here also the two kidneys were almost entirely broken up through the occurrence of these cysts, and certainly in the right kidney it was impossible to find any parenchymatous material whatever. The mere finding of casts and other elements in the urine is perhaps not so significant as some of us would like to think.

Dr. J. H. Hunt: Dr. Pierce's renal case was a staggerer to me, but his cases of hematuria interested me. I have seen a number of cases of hematuria where there seemed to be no organic disease. When I first came to Brooklyn, when I lived out in the region beyond where I live now, there was a great deal of malaria. I saw a number of cases of hematuria in connection with remittent fever, and some of them in people who were about and did not seem to be very sick, though some of them had a good deal of hemorrhage. They all gave way to quinin treatment. I believe there is such a thing as malarial congestion of the kidneys, as we have malarial congestion of the brain or of the lungs, and a congested variety of remittent fever.

Dr. Pierce: Is every case of Bright's disease followed by this condition of degeneration of the vascular system, or do the degeneration of the kidneys themselves, with casts and albumin present, constitute Bright's disease without the accompanying condition of the blood-vessels?

Dr. Van Cott: The term "Bright's disease" is unfortunately a misnomer in this condition. We know of a very great many changes in the kidney which do not at all correspond with the theory

which Bright had of the disease. The apparatus and the means of diagnosis which Bright had at his time, could only find the disease when it is very far advanced. I believe he did describe cast material, and had something to say about albumin in the urine, but if you change the term and call it nephritis, as far as my belief goes, you certainly can have changes in the kidney on the order of nephritis without primarily having any vascular change whatever, other than to have changes in the amount of blood which may be in the organ at the time. As to disease of the vessels themselves, I think you can have disease of the kidneys, or nephritis, without vascular change. On the other hand, you certainly cannot have vascular disease in the kidney without having a change in the vascular system. Always with marked sclerosis of the renal vessels you have what is called vascular nephritis, but you can have parenchymatous nephritis, and if it does not last too long you need have no changes in the vessels; if it lasts a long time and the elimination of urea is impeded, I believe you will get vascular involvement.

PAPER: "THE BACTERIOLOGY OF YELLOW FEVER,"

by Dr. E. H. Wilson.

DERMOID CYST.

Presented by Dr. Wm. H. Skene: The specimen here presented is a dermoid cyst that I removed from a patient two days ago. The patient was a young woman twenty-one years old. She began to menstruate at fourteen, and was always regular and normal in every way. Last August she menstruated and went out and took quite a long drive at the beginning of a menstrual period. She caught cold, and her menstruation stopped the following day. This was about the middle of the month. On the first of September menstruation returned and continued for two weeks, flowing for three or four days, stopping, and then recommencing. She was then confined to bed; pelvic pain was severe, and she consulted a physician, who made an examination and told her she had falling of the womb. Shortly afterward she consulted me and I made an examination and found a large mass in the right side of the pelvis. It felt somewhat smooth and elastic, appeared to contain fluid on one side, and farther up it was semi-solid, and at the upper end of it was a peculiar hard, angular mass, which pushed the uterus forward against the pubes. The diagnosis of dermoid cyst then made was based upon these angles, the semi-solid con-

sistence below, the age of the patient, and the slow growth of the tumor. This diagnosis was confirmed by the operation.

The specimen as you see is about 8 cm. long and 4 cm. wide, of an irregular oval outline. On section it was found to contain sebaceous material, hair, fluid, and some hard calcareous masses, and what appear to be rudimentary teeth.

LIPOMA OF THE NECK.

Presented by Dr. John D. Sullivan.

Z. T., laborer; sixty years of age; Irish; family history good. About ten years ago he first noticed a small growth on the back of his neck, about the size of an ordinary pea. For about three years it increased in size very slowly, and he gave it but little attention. During the fourth and fifth years its growth was more rapid, and it has continued to grow up to the present time. At present it is about the size of a child's head, and covers the space from the base of his skull to the first dorsal vertebra. It never was painful or even sensitive. Tumor was excised September 29, 1897; wound closed by interrupted sutures of silkworm gut. The mass proved to be a pure lipoma.

During the ten years he consulted a number of doctors about it. Some advised him to have it removed, and others, and his family physician—a reputable man—advised him to let it alone, probably thinking the tumor was connected with the meninges of the spinal cord. That was not so, though the tumor went down to the spines of the vertebra. He had it removed simply on account of the inconvience it gave him and is very proud since. After its removal I found on the under side of the flap another tumor about the size of a small egg, which I also dissected out. I saw him a week or two ago, and within about an inch and a half of the scar there is a little growth about the size of a pea, this he says is about the same as the one which appeared ten years ago from which this tumor developed. The majority of surgeons say that such a wound is very apt to be followed by septic infection. There was nothing of that kind here. I took special care to put pressure on both sides and to obliterate the cavity; the skin united to the underlying tissues very nicely. Primary union took place, and the wound was entirely healed seven days after the operation.

OSTEOMA OF INFERIOR MAXILLA.

Presented by Dr. John D. Sullivan.

Student, aged twelve years; female; United States; family his-

tory negative. Enjoyed good health until last July, when a swelling was noticed on the inferior maxilla of the left side opposite first molar tooth. Thinking it was due to a decayed tooth, she was sent to a dentist who removed the tooth. She was then informed that the cause of the trouble was not due to the tooth, and was placed under the supervision of a prominent physician of this city, who treated her until two weeks ago. About October 28th, she was referred to my service at St. Mary's Hospital. My diagnosis was osteosarcoma. The diagnosis is not positive; it is simply made from the clinical history and gross appearance. If there is any doubt about it I would like to have it settled by section and microscopic examination. The diagnosis was probable osteosarcoma; possibly an odontoma cyst, osteoma, or chondroma. I hoped to be able to remove the tumor with mutilating her so much as to exsect the jaw-bone, hoping it was confined to the upper portion of the jaw, but it was not.

Operation November 2, 1897; nearly one-half of the inferior maxilla was excised and the mucous membrane of the mouth was united by catgut sutures and the skin sutured with silkworm gut. Primary union followed in both mucous membrane and skin, except a small point for drainage. On the third day the patient was feeling remarkably well; yesterday and to-day she was out of doors. The surprising part of it is the little disturbance that it caused her; after she left the operating-table she looked up and smiled; had no elevation of temperature and no disturbance since; is able to eat semi-solids very well and drink without any difficulty; in fact, I can hardly realize she has undergone so much mutilation. The external sutures were removed on the ninth day.

DISCUSSION.

Dr. Van Cott: I think the growth is an osteoma, the reason being that if it was osteosarcoma I think the bone would be much thinner and much more friable than it is. That has the hard, ivory appearance of osteoma.

Dr. Sullivan: Do you think osteoma would develop in less than four months to this size, without any pain?

Dr. Van Cott: There is no reason why not. A fracture will heal in four weeks. I do not think the mere rapidity of growth is anything against it. I would not like to state that without seeing the rest of the tumor.

APPENDIX VERMIFORMIS.

Presented by Dr. John D. Sullivan.

Student; age fifteen, American; family history negative. She has enjoyed good health until one year ago, when she experienced slight attacks of colic and indigestion. Last August, while in the country, she was seized with severe pains and colic, which lasted three days. She recovered from that attack and enjoyed fairly good health until October 24th, when she was taken with another attack of colic accompanied by considerable vomiting. On the evening of October 25th, I was called to attend her. I then rendered a diagnosis of appendicitis. She was immediately transferred to St. Mary's Hospital and her appendix removed.

The specimen was prepared by Dr. Seymour, house surgeon of St. Mary's, by the method of Abbe—the appendix injected with alcohol and allowed to harden and then cut through, and the surface shows very nicely.

This is the first case I ever operated-on after seeing it only once. I was called about nine o'clock in the evening and found she had been taken ill the day before with vomiting, more or less continuous, and with considerable pain, these symptoms had continued until I saw her; that is about twenty-four hours. The girl did not think she was very sick, in fact, they did not send for me; a sister of this girl came to my office and stated her little sister was suffering in this way and asked for something to relieve her for the night; but apprehending it might be appendicitis, I offered to go around, and did so. I never made a diagnosis more easily. The appendix I could palpate and found, about the size of the thumb, a little exterior to the usual site and lying upward above the crest of the ilium. It was extremely painful on touch, and although there was some general pain I said there was appendicitis there, and said the sooner it was removed the better. The family took me at my word and said, "If the sooner it is done the better, why not do it to-night?" This was done; she went through the operation very nicely, and the wound healed by primary union with the exception of a few stitch abscesses which required the reopening of a portion of the wound; but she is now, a little over two weeks, practically well.

APPENDIX VERMIFORMIS.

Presented by Dr. John D. Sullivan.

F. J. S.; student; male; age seventeen; family history negative, excepting one maternal aunt who died of appendicitis. He enjoyed fairly good health until about eight years of age. During the last eight years he has had frequent attacks of dyspepsia and was

more or less anemic. During the summer of 1896, had an attack of abdominal pains, accompanied by vomiting, which lasted for three or four days. During the fall of 1896 and spring of 1897, had frequent attacks of colic and of a weighty sensation with more or less pain, which generally lasted a day or so. In January, 1897, had a well-marked attack which was diagnosed as appendicitis, and lasted about six days. In May and June he was enjoying fairly good health, and at 2 A.M. on July 9th, was taken with a severe pain which extended all over the abdomen and continued with increasing severity, and at the same time becoming localized in the right inguinal region. Diagnosis, appendicitis. The operation for appendicectomy was performed on July 9, 1897. Recovery uneventful, and patient was up and well three weeks after operation.

This appendix shows he has had several attacks. There were several points of ulceration, and the point of most interest is right at the base. At the base it was necrotic, almost gangrenous, and the connective and muscular tissues were entirely obliterated and the peritoneal coat very thin, so that it was the general opinion of those who saw the operation that in a few hours more the peritoneal coat would have given way and there would have been rupture and probably general peritonitis.

RESECTED PORTION OF THE ILEUM IN A CASE OF STRANGULATED HERNIA.

Presented by Dr. John D. Sullivan.

I am sorry to say this case does not reflect much credit on those connected with it. If the case had occurred in the backwoods or in the country where there were no physicians or surgeons at hand it would have been excusable, but it is hardly excusable in the city of Brooklyn.

Mrs. W.; housekeeper; age forty-three; Ireland; mother of several children. During the last ten years she has had a tumor at the umbilicus which did not give her any trouble. On October 21st, while lifting a weight, she felt something "give way" in the tumor, causing considerable pain. The diagnosis was that she had had omental hernia for the past ten years, and that on the day when she felt something in the tumor "give way" a loop of intestine had escaped into the hernial sac and after that had become strangulated. The misfortune was that she was allowed to remain without proper attendance for five days, and then her case was hopeless. The surface of the tumor was of a livid color, evidently from septic inflammation. I hoped that the tumor con-

tained only omentum and that there was no strangulation. An operation was attempted, although we said at the time that she would die, but we would give her the benefit of whatever advantage might accrue from operation. I made an elliptical incision, so as to remove the inflamed tissue, and on opening the sac found it to contain a large mass of omentum—one or two pounds—adherent to the sac. Underneath that was a loop of intestine which contained dark grumous fluid. At one side of the constriction, where the strangulation took place, there were were several fine punctures and you could see a thin fluid oozing out. In this condition I was in doubt whether to do anything or not, but I made up my mind to loosen the strangulation, and as I incised and enlarged the umbilical opening she appeared to die and stopped breathing; but we immediately poured in several quarts of hot saline solution at a temperature of 105° or 110° F., and it was remarkable how she rallied after getting the saline solution into the abdomen. She rallied so well that I felt justified in going on and resecting this portion of the intestine, and she endured the operation very well and left the table about as well as she came on it. She never came to though, and died that night. Besides resecting, I ligated and removed that portion of the omentum that was in the sac and closed up the hernial opening with silkworm-gut sutures.

ANEURISM OF AORTA—RUPTURE.

Presented by Dr. Archibald Murray.

Male; age fifty-five; bricklayer. Previous history: Chronic rheumatism. Has used alcohol and tobacco to excess. Syphilis —primary lesion twenty-five years ago. Present history: Attack came on suddenly while in bed with sharp pain in side; felt as if he had a lot of wind on his stomach. Pain across lower part of chest, increased on inspiration. Considerable dyspnea. Has a constant retching as if he would like to vomit.

It was an ambulance case. The man died seven hours after he was brought in, and not much history could be obtained.

(To be continued.)

BROOKLYN MEDICAL SOCIETY.

The following officers have been elected for the year 1898:

President, Peter Scott; vice-president, J. H. Droge; secretary, B. F. M. Blake; corresponding secretary, J. J. Bowen; treasurer, L. E. Meeker; librarian, E. A. Hatch.

NEW YORK STATE MEDICAL ASSOCIATION.

The Fifth District Branch of the N. Y. State Medical Association will hold its Fourteenth Annual Meeting at 315 Washington street, Brooklyn, on Tuesday, May 24, 1898.

Gonorrhea will be the subject for papers, discussions, and reports of cases. Dr. Robert W. Taylor will open the subject by giving the "Pathology and Treatment in Males." Dr. J. W. S. Gouley will treat of "Urethral Strictures." Dr. Wm. E. Beardsley will treat of "Gonorrheal Rheumatism." Dr. Lawrence Coffin will treat of "Gonorrheal Ophthalmia in Adults." Dr. Wm. McCollom will discuss the "Moral Prophylaxis and the Ethical Duty of Physicians to the Public." Dr. J. C. Bierwirth will discuss the "Medico-Legal Responsibility of Physicians to Their Patients and Patients' Friends." Dr. L. Grant Baldwin will give the "Symptoms and Diagnosis of Gonorrhea in Females" and will be followed by Drs. Walter B. Chase and Frederick H. Wiggin on the "Palliative and Operative Treatment." Dr. N. L. North, Jr., will present the subject of "Gonorrheal Ophthalmia of Infants," and be followed by Drs. A. Mathewson and L. A. W. Alleman on the same subject.

N. W. Leighton, President.

E. H. Squibb, Secretary.

CORRESPONDENCE.

NEW YORK MEDICAL LEAGUE.

Brooklyn, N. Y., February 15, 1898.

To the Brooklyn Medical Journal:

At the meeting of the physicians of Brooklyn, held in the Johnston Building on the evening of June 15th last, called for the purpose of forming a Brooklyn Section of the New York Medical League, one of the speakers possibly gave voice to the sentiment that the League was opposed to the schools. The Executive Committee take this opportunity to correct any such statement, if it were so understood, and beg to state that while the speaker may have held such an opinion as his own, it is at variance with the objects of the League, which are certainly *not* opposed to the schools. Will you be kind enough to correct any erroneous im-

pressions of this nature among any of your readers who may have been present at that meeting.

Yours truly,

E. D. PAGE,

297 DeKalb Avenue. Secretary.

BAD BILLS.

FEBRUARY 15, 1898.

TO THE BROOKLYN MEDICAL JOURNAL:

In such times as the present when the duties of the practitioner are very much less than when disease is prevalent he has more opportunity to inquire into the evils from which he as a physician suffers. Therefore, I beg my suggestions may receive some attention from the members of our profession.

Less than five per cent. of the population in our city possess any real estate. Yet according to the laws of New York State no personal property that is necessary for the living and comfort of any citizen can be seized for debt, nor can any property that is necessary for the owner to possess in order to conduct his business be seized to satisfy a judgment.

In nine cases out of ten we physicians have to "book" our accounts. Rarely in prolonged cases are we paid cash for each call. Sad are we indeed when it becomes necessary to arrange our accounts, as the numerous unsettled accounts have each its own little history of disappointment. It has got to that point with many physicians, myself included, that we fear to send good money after bad in trying to collect many of our bills.

Look at the numerous collecting agencies. Scarce a day goes by but a representative from such a concern darkens our door and falsely cheers our hearts with his boasts of securing payment from our dead-beat patients. What results do these collectors secure? Few, if any, of this very numerous class of citizens known as "beats" but have learned that naught can be done to compel them to pay their bills. I have had various experiences with these agencies, and I'll quote one of these here. Last March I gave fourteen bills to an enterprising young lawyer to collect. They amounted to $265, and he desired only the modest sum of fifty per cent. for their collection. After bulldozing, begging, and threatening the debtors to pay, he returned me the bills marked N. G. My other experiences have not been much better than this one.

Not alone from irresponsible people do we suffer. A majority of our factories and business houses are insured in some Fidelity company. These Fidelity companies are bound by their contract to be responsible for any suits or debts occurring as a result of an accident. I have attended dozens of cases where injuries were the result of gross negligence on the part of the employers, and I have been called in by the employes themselves, but never in a case where the factory or business house was insured in a Fidelity company have I been able to collect my bill. What is more, I know it would be useless to try to collect it. These companies have the brightest tricksters in the legal profession on salaries, who can delay and hinder justice to such an extent that justice cannot be obtained. I have often heard it boasted of, that the judiciary were not beyond their control.

There is a large class of our citizens who live in a station of life far beyond what their incomes should allow. How can a man on a salary of eighteen dollars a week pay thirty dollars a month rent, and live in apparent luxury, and be expected to pay a doctor's bill? He may be honest enough in his intentions but he never has any money to spare with which to pay his physician. Yet it is safe to say that a good percentage of our bad bills is the result of people having an appetite greater than their income.

Physicians as a rule are very poor business men. I feel certain that this is due largely to the enthusiasm of the sublime which our medical studies and training develop within us, and cause us to look with unpractical eyes on the things of life. We fail to appreciate that in nature, not mortals, we find truth. Many of the abuses from which we suffer I know could be relieved if we would put aside our professional "cloak" and do matters as business men.

These abuses, instead of diminishing, grow daily, and every practitioner has his own personal experience which tells him that the future for the physician looks blacker than the present, and the present has a decidedly shady hue.

What can we do? The number of times I have been asked this question by fellow-practitioners, and the number of times I have asked myself the same question, are beyond reckoning. Only too well do we appreciate that in a vast majority of cases we are without redress for the non-payment of our bills. Why is this so? Because unless a man has some real estate we cannot collect any judgment against him. In other words the irresponsi-

bility of most of our population is the cause of so large a percentage of our bills not being paid. Why are they irresponsible?

Because the laws of New York State make them so. How can we remedy this abuse?

Change the laws.

How are the laws changed?

Through acts passed by the State Legislature.

We have our medical societies that discuss, and discuss, and discuss these matters, but while we all feel the need of some action toward remedying these evils, yet no steps are taken. We all know how bills are passed through the Legislature, and know that such a bill would have to have much pressure brought upon it to secure its passage. The combined influence of the physicians of New York State would sweep such a bill through the State Legislature without halting. Besides, look at the assistance we physicians could secure from every retail dealer in every kind of merchandise who like ourselves is the victim of irresponsible debtors.

What I would suggest to be done is that correspondence be held with the various medical societies of our State, and with individual members of our profession, urging them to use their influence toward passing some bill to remedy this evil. There is not an assemblyman, nor State senator, who cannot be reached, and there are but few physicians who would not gladly subscribe a fraction of a dollar toward paying the expenses of the passage of such a bill to mitigate the abuses from which he suffers.

The bill should cover the right to attach a man's salary for debt, compelling the employer to retain a certain percentage of each salary till the judgment be satisfied. I would suggest that ten per cent. from such wages be retained. In some States this is now the law, and in conversation with a practitioner from Rhode Island where this law is now in vogue, he assured me that physicians, as a rule, had very few bad debts. Again, a restraint should be put on Fidelity companies assuming the just debts of manufacturers, etc. Personal property seizable for debt should be much enlarged. A man may have a fortune in paintings on his wall, and yet we cannot collect a dollar from him.

It seems a hard, hard fact that we physicians must trust so much to the honesty of others, and still have no redress from the dishonesty of so large a majority of our irresponsible debtors. Will we remain inactive against these injustices? Can we afford to remain inactive? This question could be easily answered

by our own creditors who feel that they cannot get "blood from a stone," nor money from the physician who gets none.

Look at the report of the State Board of Charities a few days ago. "More than fifty per cent. of the population of our city received medical attendance free" was their statement, and I can truly add half of the other fifty per cent. cheat the doctors out of their fees. Many a time the poor devil who for charity attends the sick requires much more charity for himself. I have in mind now two earnest, honest classmates of mine, one killed himself, and the other is a helpless idiot. They are but examples of the results of the abuses from which we physicians suffer in our inability to secure ample reward for our services.

74 Rush street. R. L. GRAHAM, M.D.

HISTORICAL DEPARTMENT.

THE FIRST COUNCIL AND FACULTY OF THE LONG ISLAND COLLEGE HOSPITAL.

It seems that all institutions that have attained large proportion have had their origin in small beginnings; this condition is equally true of the Long Island College Hospital. Little did Daniel Ayres, M.D., LL.D., Louis Bauer, M.D., F.R.C.S., and John Byrne, M.D., LL.D., think when they met in the German Dispensary at 147 Court street, on October 27, 1857, that the organization of a hospital as then contemplated would in forty years from that time reach its present magnificent proportions; but such is the history of the institution, which, for all practical purposes, dates its existence from December 27, 1857, as upon this date the name of the College was adopted. A charter was granted by the State on March 13, 1858, and the property known as the Perry Mansion was purchased in the name of the Hon. Samuel Sloan for the sum of $31,250.

The first course of lectures began on Thursday, March 29, 1860, and on July 24, 1860, the first class, numbering twenty-one men, graduated.

A few words regarding those who composed its first Council and Faculty may not be out of place at this time:

THEODORE LEWIS MASON, M.D.,

was the first president of the Council, of whom a biographical

Frank Hastings Hamilton, A.M., M.D., LL.D.
Ira Scott Clinton Enos, M.D.
William Henry Hinkley, M.D.
James Hawley Tucker, M.A., M.D.
Austin Flint, M.D., LL.D.
Theodore Lewis Mason, M.D.
James Harvey Henry, M.D.
Robert Ogden Doremus, A.M., M.D., LL.D.
John Cott Hutton, M.D., M.D.
Joseph Christman Hutchison, M.D., LL.D.
Chauncey Leigh Mitchell, M.A., M.D.
Erskine Mabie Chapman, M.A., M.D.

First Council and Faculty, Long Island College Hospital, 1860

sketch appeared in the BROOKLYN MEDICAL JOURNAL for October, 1897.

WILLIAM HENRY DUDLEY, M. D.

Born in Ireland, 1811, died in Brooklyn, N. Y., October 9, 1886. He attended lectures at the Royal College of Surgeons, Dublin, Ireland from 1831 to 1833, at which time he accepted the position of Health-Officer to the Marine Hospital at Jamaica, West Indies, where he remained until 1841. Coming to New York he matriculated with the College of Physicians and Surgeons, from which institution he graduated in 1842, and began the practice of medicine in the city of Brooklyn in 1843.

He was a member of the Council of the L. I. C. H. from 1860 to 1886, and from 1881 to 1886 was president of the Collegiate Department, and member of the Board of Regents from 1878 to 1886.

He was a Fellow of King's College of Physicians and Surgeons, Jamaica, West Indies, 1841; New York Academy of Medicine from 1847 to 1886; New York State Medical Society from 1881 to 1886.

His contributions to medical literature have been as follows: "Purpura, a Case," "Pleurisy, Chronic, with Spontaneous Opening," "Esophagus, Perforation and Penetration of Lung by a Chicken Bone," 1859, "Address at the Alumni Dinner," L. I. C. H., May 20, 1884.

CHAUNCEY LEEDS MITCHELL, A. M., M. D.

Born at New Canaan, Conn., November 30, 1813, died in Brooklyn, N. Y., May 8, 1888. He graduated at Union College, A. B., 1833, A. M., 1836, and at the College of Physicians and Surgeons, N. Y., 1836, and practised medicine in Brooklyn, N. Y., from 1843 to 1888; member of the Council, L. I. C. H., from 1860 to 1888, and a member of the Board of Regents from 1878 to 1888; Professor of Obstetrics, Castleton, Vermont, Medical College, from 1842 to 1845; member of the Medical Society of the County of Kings, of which he was president in 1848, and 1858–'59; New York Academy of Medicine from 1847 to 1888; American Academy of Medicine from 1879 to 1888; and Brooklyn Pathological Society from 1871 to 1888.

His medical papers were: "Effects of Ergot in Congestion of the Male Genital Organs," and "Labor Complicated with Disease of the Heart."

JAMES HARVEY HENRY, M. D.

Born at Rutland, Mass., February 22, 1806, died in Brooklyn, N. Y., November 1, 1875. Graduated at the Berkshire Medical

Institute, 1827. Member of the Council, L. I. C. H., from 1860 to 1867; and of the Medical Society of the County of Kings, of which he was president in 1850.

AUSTIN FLINT, SR., M.D., LL.D.

Born at Petersham, Mass., October 20, 1812, died in New York City, March 13, 1886. Graduated from Harvard University Medical Department, 1833. Professor of Practice of Medicine, Rush Medical College, 1844; Buffalo Medical College, from 1847 to 1852; University of Louisville, from 1852 to 1856; Buffalo Medical College, from 1856 to 1858; Professor of Clinical Medicine, Medical School, New Orleans, from 1858 to 1860; Professor of Practical Medicine and Pathology, L. I. C. H., from 1860 to 1867; Professor of Clinical Medicine, L. I. C. H., 1868; Professor of Practice of Medicine and Clinical Medicine, Bellevue Hospital Medical College, from 1861 to 1886; President New York Academy of Medicine, 1872; President American Medical Association, 1883.

His medical writings have been so numerous, and are so well known by the profession that it is unnecessary to enumerate them here.

FRANK HASTINGS HAMILTON, A.M., M.D., LL.D.

Born at Wilmington, Vt., September 10, 1813, died in New York, August 11, 1886. He prepared himself for the study of medicine at Union College, receiving the degree of A.B. in 1830, and A.M. in 1833. In 1869 Union College conferred upon him the degree of LL.D. Graduated M.D. at the University of Pennsylvania in 1833. Lecturer on Anatomy and Physiology in Theological Seminary, Auburn, N. Y.; Lecturer on Surgery, Fairfield College of Physicians and Surgeons, 1839 and 1840; and Geneva Medical College, 1840 and 1841; Professor of Surgery, Buffalo Medical College, from 1846 to 1858, and at the L. I. C. H. from 1860 to 1862; Professor of Military Surgery, Fractures and Dislocations, L. I. C. H., from 1863 to 1870, and at Bellevue Hospital from 1861 to 1868; Professor of Surgery, Bellevue Hospital Medical College, from 1868 to 1875; President New York State Medical Society, 1855; American Medical Association, 1879; New York Pathological Society, 1866; Medico-Legal Society, 1875 and 1876; Society of Medical Jurisprudence, 1885.

The same may be said regarding his medical writings as of those of Dr. Flint.

JOHN CALL DALTON, A.B., M.D.

Born at Chelmsford, Mass., February 2, 1825, died in New

York, February 12, 1889. Graduated A.B. from Harvard University in 1844, and M.D. from the Medical Department in 1847. Lecturer on Physiology, Boylston Medical School, Boston, Mass., from 1849 to 1857; Professor of Physiology, Medical Department, University of Buffalo, from 1857 to 1860; and in the Vermont Medical College, 1855 and 1856; Professor of Physiology and Microscopic Anatomy, L. I. C. H., from 1860 to 1862; and in the College of Physicians and Surgeons, N. Y., from 1855 to 1883; President of the College of Physicians and Surgeons, N. Y., from 1884 to 1889.

His medical writings have generally been in the line of physiology, by which he has become known to the medical profession throughout the world.

ROBERT OGDEN DOREMUS, A.M., M.D., LL.D.

Born in New York City, January 11, 1824. Graduated from the University of the City of New York, A.M. in 1842, and M.D. in 1851, receiving the degree of LL.D. from the same institution. He is the only member of the Faculty of the L. I. C. H. of 1860 still living, and during his long and useful career has held the following positions: Professor of Chemistry, New York College of Pharmacy, 1849; Professor of Chemistry, and one of the founders of the New York Medical College, 1850; Professor of Natural History, "Free Academy," now College of the City of New York, 1851; Professor of Chemistry and Toxicology, L. I. C. H., from 1860 to 1863; and the Bellevue Hospital Medical College, 1861; President New York Philharmonic and Medico-Legal Societies.

JOSEPH CHRISMAN HUTCHISON, M.D., LL.D.

Born in Howard County, Missouri, February 22, 1827, died in Brooklyn, N. Y., July 17, 1887. Graduated M.D. from the University of Pennsylvania, 1848, receiving the degree of LL.D. from the University of Missouri in 1880. Professor of Operative Surgery and Surgical Anatomy, L. I. C. H., from 1860 to 1867; President of the Collegiate Department, 1886 and 1887; Medical Society of the County of Kings, 1864; New York State Medical Society, 1866; New York Pathological Society, 1871; Health Commissioner, City of Brooklyn, from 1873 to 1875.

Among the many contributions to medical literature may be mentioned the following:

"Physiology and Hygiene." For school use. 12mo., 1871.

"The Laws of Health." For school use. 12mo.

"Lectures on Orthopedic Surgery." 12mo., 1880.

He practised medicine in the City of Brooklyn from 1853 to 1887.

DE WITT CLINTON ENOS, M. D.

Born at De Ruyter, Madison county, N. Y., March 17, 1820, died in Brooklyn, N. Y., December 14, 1868. Received his medical education in the College of Physicians and Surgeons, New York, from which institution he graduated in 1846. Professor of General and Descriptive Anatomy, L. I. C. H., from 1860 to 1867; Professor of Operative and Clinical Surgery, L. I. C. H., 1867 and 1868; President of the Medical Society of the County of Kings, 1863.

Among the many medical papers presented to the Medical Society from 1859 to 1865, the one entitled "Treatment of Deformity of the Feet with Plaster of Paris," in 1863, deserves special mention.

He practised medicine in the City of Brooklyn from 1847 to 1868.

EDWIN NESBIT CHAPMAN, M.A., M.D.

Born in Ridgefield, Conn., February 26, 1819, died in Brooklyn, N. Y., March 2, 1888. Graduated M.A. from Yale College in 1842, and received the degree of M.D. from Jefferson Medical College in 1845. Professor of Therapeutics, Materia Medica, and Clinical Midwifery, L. I. C. H., from 1860 to 1863; Professor of Obstetrics, and Diseases of Women and Children, L. I. C. H., from 1863 to 1868.

His contributions to medical literature have generally been in relation to diseases of women, and he is the first author in this city to publish a book upon diseases peculiar to women: "Hysterology; a Treatise on the Diseases and Displacements of the Uterus." William Wood & Co., 1872. Also, "Antagonism of Alcohol and Diphtheria," 12mo., 1878.

He was in practice in this city from 1845 to 1888.

JAMES DOWLING TRASK, M.A., M.D.

Born in Beverly, Mass., August 16, 1821, died at Astoria, L. I., September 2, 1883. Graduated M.A. from Amherst College in 1839, receiving the degree of M.D. from the University of the City of New York in 1844. Professor of Obstetrics, and Diseases of Women and Children, L. I. C. H., from 1860 to 1863.

His contributions to medical literature are as follows: "Placenta Previa," "Rupture of the Womb," and "Mushroom Poisoning."

He was in practice in the City of Brooklyn from 1844 to 1848; White Plains, N. Y., from 1848 to 1859; Astoria, L. I., from 1859 to 1883.

JOHN GEORGE JOHNSON, A.B., M.D.

Born in Andover, Mass., October 10, 1833. Graduated A.B. from Harvard University in 1854, and M.D. from the College of Physicians and Surgeons, New York, in 1857, and is still in active practice in this city. He was the first Demonstrator of Anatomy in the L. I. C. H. in 1860.

In looking upon the faces of those who instructed the first medical class in our city, and who first demonstrated the practicability of clinical teaching in America, may we feel inspired with a feeling of honor and respect, honor for the position which they held in our profession, respect for their character as men, and the high standard of citizenship which they maintained. Let me also at this time acknowledge the assistance received from Lewis D. Mason, M.D., in presenting the writer with several of the portraits contained in the group, and to Henry Conkling, M.D., for portrait of Dr. Enos.

WILLIAM SCHROEDER, M.D.,
Secretary of Historical Committee.

ARNOLD STUB, M.D.

Dr. Arnold Stub died at his residence, 174 Schermerhorn street, on February 1st, in the sixty-sixth year of his age.

He was born in Elbing, Prussia, February 5, 1832, and came to this country in 1856. At the beginning of the war he entered the Federal army. He was appointed assistant surgeon of the Ninetieth New York Volunteers by Governor Morgan in 1862, and promoted surgeon with rank of major in 1864. During the yellow-fever epidemic at Key West, Fla., he was in charge of the general hospital. During the campaign in Louisiana he was appointed surgeon-in-charge of the artillery brigade of the Nineteenth Army Corps, remaining in that capacity until appointed medical purveyor of the middle military division by General Hancock.

Dr. Stub received personal letters from General Hancock and Thomas commending his skill and bravery.

At the close of the war Dr. Stub resumed the practice of his profession in Brooklyn.

He leaves a widow and three daughters—Mrs. John Simon of Staten Island, Mrs. A. S. Vur of East Orange, and Mrs. Walter Schuman, wife of the American Consul at Mainz, Germany.

MISCELLANEOUS.

THE DISPENSARY BILL.

The following is the bill introduced by Mr. Sullivan and now before the Committee on Public Health of the New York Senate:

"An act to amend the State charities law, relating to the licensing and regulation of dispensaries by the State Board of Charities.

"The people of the State of New York, represented in Senate and Assembly, do enact as follows:

"SECTION 1. Article one of chapter five hundred and forty-six of the laws of eighteen hundred and ninety-six, entitled 'An act relating to State charities, constituting chapter twenty-six of the general laws,' is hereby amended by inserting at the end thereof the following sections:

"SEC. 19. What Is a Dispensary?—For the purposes of this act, a dispensary is declared to be any person, corporation, institution, society, association, or agent whose purpose it is, either independently or in connection with any other purpose, to furnish, at any place or places, to persons non-resident therein, either gratuitously or for a compensation determined without reference to the value of the thing furnished, medical or surgical advice or treatment, medicine or apparatus; provided, however, that the moneys used by and for the purposes of said dispensary, shall be derived wholly, or in part, from trust funds, public moneys, or sources other than the individuals constituting said dispensary and the persons actually engaged in the distribution of charities of said dispensary.

"SEC. 20. Licensing of Dispensaries by State Board of Charities.—A license may be issued by the State Board of Charities to a dispensary as provided in this section. An application in writing for such license shall be made to such board in the form and manner prescribed by it. There shall be attached to such application a statement verified by the oath of the applicant, containing such facts as the board may require. If, in the judgment of such board, the statement filed and other evidence submitted in relation to such application indicate that the operations of such dispensary will be for the public benefit, a license shall be issued to the dispensary applying therefor. The form of such license shall be prescribed by the Board. A dispensary shall not enter

JOHN G. JOHNSON, M.D.

upon the execution, or continue the prosecution of its purpose unless licensed by the State Board of Charities as provided herein.

"SEC. 21. Rules and Regulations.—The State Board of Charities may make rules and regulations and alter or amend the same, in accordance with which all dispensaries shall furnish and applicants obtain medical or surgical relief, advice, or treatment, medicine, or apparatus. But such rules and regulations shall not, in any case, specify the particular school of medicine in accordance with which a dispensary shall manage or conduct its work, or determine the kind of medical or surgical treatment to be provided by any dispensary.

"SEC. 22. Revocation of Licenses.—The State Board of Charities or any of its members may, at any and all times, visit and inspect licensed dispensaries. They may examine all matters in relation to such dispensaries and ascertain how far they are conducted in compliance with this law and the rules and regulations of the board. After due notice to a dispensary and opportunity for it to be heard, the board may, if public interest demands and for just and reasonable cause, revoke a license by an order signed and attested by the president and secretary of the board. Such order shall state the reason for revoking such license and shall take effect within such time after the service thereof upon the dispensary as the board shall determine.*

"SEC. 23. Drug-store or Tenement-house Not to Be Used by Dispensary; Unlawful Display of Signs.—After the taking effect of this act, no dispensary shall make use of any place commonly known as a drug-store, or any place or building defined by law or by an ordinance of a board of health as a tenement-house; nor after such time shall any person, corporation, institution, society, association, or agent thereof, except a duly licensed dispensary, display or cause to be displayed a sign or any other thing which could directly, or by suggestion, indicate the existence of the equivalent, in purpose and effect, of a dispensary.

"SEC. 2. Any person who violates any of the provisions of this act, or any of the rules and regulations made and published under the authority of this act, shall be guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not less than ten dollars and not more than two hundred and fifty dollars.

"SEC. 3. This act shall take effect October first, eighteen hundred and ninety-eight."

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*The bill has been amended so as to provide for a review of the board's action by the Supreme Court.

G. ARCHIE STOCKWELL, F. Z. S.

Dr. Stockwell, for ten years the confidential medical adviser of Parke, Davis & Co., Detroit, has severed his connection with that firm and is now engaged in the same capacity with Henry K. Wampole & Co. of Philadelphia. Hs has also severed his connection with the *Medical Age*, and will probably soon issue a new high-class and wholly independent medical journal that will be entirely separate from his connection with the Philadelphia house.

PIPERAZIN WATER IN THE TREATMENT OF GOUTINESS.

In the *Medical News* of November 27, 1897, Professor Reynold W. Wilcox of the New York Post-Graduate Medical School, discusses the subject of "Goutiness," as described by Ewart, and gives his experience in the use of piperazin in this condition. He says: "The purpose of this paper is to point out that a very considerable number of so-called neurasthenics are really patients who are suffering from goutiness of the particular variety known as neurotic lithemia. It is a notorious fact that these patients are cured with difficulty, notwithstanding that they are curable. The clearing of the mental atmosphere of depression as soon as the stored uric acid is set in motion toward excretion is remarkable. Further, since it is not the excess of manufactured uric acid, but rather its deficiency of elimination to which the symptoms are due, and in addition, that a vegetable diet contains albumin of a variety which is difficult of oxidation, renders the prohibition of red meats an illogical procedure. Piperazin *in vitro* has been proven to be an efficient and harmless solvent for uric acid. Administered with phenocoll, better results are obtained than when piperazin is alone employed.

"So far as my knowledge goes, piperazin water is the method of choice for the administration of this drug, because perfect solution in proper dose and quantity of menstruum is obtained.

"It may then be concluded: (1) That uric acid, as a causative factor in neurotic lithemia, a form of goutiness, should not be overlooked. (2) That a limited meat diet is productive of good results. (3) That piperazin administered in the form described in this paper is the remedy of choice for the elimination of uric acid, not only in this, but in other pathologic conditions dependent upon the same cause."

COCA.

W. Golden Mortimer, M.D., of 504 W. 146th street, is preparing a work on "Coca," and will be glad to receive the results of personal observation or experience in its use as a therapeutic agent, or as a food.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

THE TREATMENT OF DISEASE BY ELECTRIC CURRENTS.. A Handbook of Plain Instruction for the General Practitioner. By S. H. Monell, M.D., Founder and Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics and Röntgen Photography, etc. New York: William Beverley Harrison, 1897. Pp. 1100. Price, net, $7.50.

It is impossible, in the space at our disposal, to adequately notice this volume of 1100 pages. Dr. Monell's previous work on "Static Electricity" prepared us for a treatise both practical and scientific, and we are not disappointed. He is an enthusiast in his specialty, a quality which reformers must possess to accomplish results of any magnitude. While all will not agree with the author as to the value of electricity in the many diseases in which he advocates its use, still it is undoubtedly true that owing to ignorance of its remedial powers and of the method of its application, physicians are neglecting one of their most potent allies. It is just here that Dr. Monell appears to advantage. The language is terse, yet clear and intelligible to every educated physician, even though he may not have devoted much time to the science of electricity. The volume is free from electrotechnics, and the main facts of electrophysics and physiology are condensed into a few chapters, only so much of them being given as to enable the reader to apply them to therapeutics.

"Explicit directions are given for the selection of current, choice of poles, application of electrodes, regulation of dose, and frequency of treatment, throughout the therapeutic range of galvanic, faradic, and static currents."

TWENTIETH-CENTURY PRACTICE. Vol. XII. Mental Diseases; Childhood and Old Age. New York: William Wood & Co., 1897.

This is one of those oddly made up books that often prove to have much of interest, and such is also the case with this one.

To "Insanity" is given 254 pages. This subject is treated by Blandford of London. He describes the insanities as "disorders of the brain affecting the mind." Cerebral anatomy is briefly touched upon, and he seems to hold the older and safer view that the cerebral arteries are under vasomotor con-

trol. To "Pathology, Etiology, and Morbid Anatomy" he devotes 66 pages. The various causative factors are interestingly discussed from the asylum standpoint, though the possible importance of antitoxins is hardly considered. There is also some duplicating of causes; as, *e. g.*, under anemia he fails to look for its source.

Sollier of Paris has 112 pages on "Idiocy." He gives an exposition of the subject that is much needed in English. He comes out as a mild reactionist against too high aims in the education of this class.

The fifty odd pages on "Criminal Anthropology," by Lombroso, are certainly welcome as a succinct statement of his work in that line.

The 108 pages on "Old Age," by Boy-Teissier of Marseilles, are much too brief, and their text too general in statement to be of most value.

Finally, the "Diseases of Childhood" are handled in a space of about 300 pages by Comby of Paris. His descriptions are very concise, but on the other hand seem to cover well the wide range of troubles occurring in or special to that age.

WILLIAM BROWNING, M.D.

THE INTERNATIONAL MEDICAL ANNUAL, 1898.

Messrs. E. B. Treat & Co. announce the early publication of the Annual for 1898. It will contain many special articles of great interest, in addition to the regular summaries of the year's work in medicine and surgery, by thirty-eight editors, each contributing to the department with which he is specially identified.

Among the special articles will be found one on "The Chief Pathogenic Bacteria in the Human Subject," with descriptions of their morphology and methods of microscopical examination, by S. G. Shattock, F.R.C.S., the Pathological Curator of the Museum of the Royal College of Surgeons, London, illustrated by a series of ten finely colored plates; two contributions by Drs. Robert Jones, F.R.C.S., and A. H. Tubby, M.S., on "The Obliteration of the Deformity in Pott's Disease," and on "Congenital Dislocation of the Hip," showing the technic in each case; both are freely illustrated, chiefly by reproductions from photographs.

The work will be thoroughly illustrated by thirty-six full-page plates, twelve being colored, besides many illustrations, line and half-tone, incorporated in the text.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By John V. Shoemaker, M.D., LL.D., Professor of Skin and Venereal Diseases in the Medico-Chirurgical College and Hospital of Philadelphia, etc. Third edition, revised and enlarged, with chromogravure plates and other illustrations. New York: D. Appleton & Co., 1897. Pp. 894.

In this edition the author has given the most recent views of his own and of other dermatologists on the etiology and treatment of this most important class of human diseases, and has also incorporated the results of the latest investigations of their bacteriology and pathology, and this, too, without increasing the size of the volume. Taken as a whole, Shoemaker's Treatise deserves the hearty reception which it has had from the profession.

Mr. W. B. Saunders of Philadelphia announces the following books to be published during the present year. Lehmann's Hand-atlases; of these eight or ten will appear, among them:

"Atlas of Internal Medicine and Clinical Diagnosis." By Dr. Chr. Jakob of Erlangen. Edited by Augustus A. Eshner, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic; Attending Physician to the Philadelphia Hospital; 68 colored plates, and 64 illustrations in the text.

"Atlas of Legal Medicine." By Dr. E. R. von Hoffman of Viena. Edited by Frederick Peterson, M.D., Clinical Professor of Mental Diseases, Woman's Medical College, New York; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York. With 120 colored figures on 56 plates, and 193 beautiful half-tone illustrations.

"Atlas of Operative Surgery." By Dr. O. Zuckerkandl of Vienna. Edited by J. Chalmers DaCosta, M.D., Clinical Professor of Surgery, Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital. With 24 colored plates, and 217 illustrations in the text.

"Atlas of Laryngology." By Dr. L. Grünwald of Munich. With 107 colored figures on 44 plates; 25 black-and-white illustrations.

"Atlas of External Diseases of the Eye." By Dr. O. Habb of Zurich. Edited by G. E. de Schweinitz, M.D., Professor of Ophthalmology, Jefferson Medical college, Philadelphia. With 100 colored illustrations.

"Atlas of Venereal Diseases." By Dr. Carl Kopp of Munich. Edited by L. Bolton Bangs, M.D., late Professor of Genito-Urinary and Venereal Diseases, New York Post-Graduate Medical School and Hospital. With 63 colored illustrations.

"Atlas of Skin Diseases." By Dr. Karl Kopp of Munich. With 90 colored and 17 black-and-white illustrations.

Besides these atlases, the following are in preparation for early publication,

"An American Text-book of Diseases of the Eye, Ear, Nose, and Throat." Edited by G. E. de Schweinitz, M.D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia; and B. Alexander Randall, M.D., Professor of Diseases of the Ear in the University of Pennsylvania and in the Philadelphia Polyclinic.

"An American Text-Book of Pathology." Edited by John Guitéras, M.D., Professor in General Pathology and of Morbid Anatomy in the University of Pennsylvania; and David Riesman, M.D., Demonstrator of Pathological Histology in the University of Pennsylvania.

"An American Text-book of Legal Medicine and Toxicology." Edited by Frederick Peterson, M.D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York; and Walter S. Hains, M.D., Professor of Chemistry, Pharmacy, and Toxicology in Rush Medical College, Chicago, Illinois.

"Stengel's Pathology." A Manual of Pathology. By Alfred Stengel, M.D., Instructor in Clinical Medicine, University of Pennsylvania; Physician to the Philadelphia Hospital; Professor of Clinical Medicine, Woman's Medical

College; Physician to the Children's Hospital; late Pathologist to the German Hospital, Philadelphia, etc.

"Church and Peterson's Nervous and Mental Diseases." Nervous and Mental Diseases. By Archibald Church, M.D., Professor of Mental Diseases and Medical Jurisprudence in the Northwestern University Medical School, Chicago; and Frederick Peterson, M.D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York.

"Heisler's Embryology." A Text-book of Embryology. By John C. Heisler, M.D., Professor of Anatomy in the Medico-Chirurgical College, Philadelphia.

"Kyle on the Nose and Throat." Diseases of the Nose and Throat. By D. Braden Kyle, M.D., Chief Laryngologist to St. Agnes' Hospital; Bacteriologist to the Orthopedic Hospital and Infirmary for Nervous Diseases; Instructor in Clinical Microscopy and Assistant Demonstrator of Pathology, Jefferson Medical College, Philadelphia.

"Hirst's Obstetrics." A Text-book of Obstetrics. By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania.

"West's Nursing." An American Text-book of Nursing. By American Teachers. Edited by Roberta M. West, late Superintendent of Nurses in the Hospital of the University of Pennsylvania.

TREATMENT OF UTERINE FIBROIDS. By Franklin H. Martin, M.D. The W. T. Keener Co., Chicago. 1897.

Not many years ago a treatise on uterine fibroids would have been considered a work of supererogation, but with advancing science and a better appreciation of the rôle this disease plays in gynetic literature, such facts find appropriate expression in this work.

The value of systemic remedies, while of value in certain cases—principally as palliatives—is not so highly esteemed by most gynecologists, as would justify the author's conclusions. That ergot is useful, by producing contraction of the blood-vessels and thereby muscular contraction, is within certain limits tolerably well established—while the remedy most often of value in moderating and controling hemorrhage, Hydrastis Canadensis, is not mentioned. Notwithstanding all that has been said and written concerning electricity, few practitioners believe that electrolysis or electrical treatment possesses any power to diminish fibrous structures, and this portion of the book might with advantage have remained unwritten.

The surgical treatment of this disease is intelligently discussed, the preparation and treatment are given proper emphasis, while the technic is plain and practical.

Without going into details it may be said that the trend of modern surgery is toward radical treatment of fibroids—when uncontrolled by palliative remedies—and in this the author may justly lay claim to orthodoxy.

WALTER B. CHASE, M.D.

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

ENTERED AT BROOKLYN, N. Y. POST OFFICE AS SECOND CLASS MATTER.

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VOL. XII. No. 4. WHOLE No. 124. | BROOKLYN, N. Y., APRIL, 1898. | Single copies 25 cents $2 a year, in advance

ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

TREATMENT OF TYPHOID FEVER.

BY JAMES MC MANUS, M.D.

Assistant Attending Physician, Norwegian Hospital, Brooklyn, N. Y.

Read before the Medical Society of the County of Kings.

There are many different methods of treating typhoid fever. The principal ones are the expectant plan, the expectant symptomatic plan, the Brand method of cold-water bathing, and the antiseptic method—local and general asepsis—in which is included the method of Dr. Woodbridge.

It is really bewildering to read all of the different writers' views upon every step of typhoid fever. For example, the generally accepted belief that a fluid diet should be maintained throughout the course of the disease is disputed by some, who claim that the giving of finely divided beef or chop is not followed by evil results.

The following directions for treatment are very generally accepted, whatever the other methods employed:

The patient should be placed in bed, in a large ventilated room, removed as far as possible from the noise of the streets, and should be kept very quiet. His evacuations are to be re-

ceived in suitable receptacles, properly prepared for disinfecting the discharges, and all unnecessary exertion is to be avoided. His pulse, respiration, and temperature ought to be taken at least night and morning, and a record kept of the amount of nourishment given, of the number, kind, and character of his evacuations, and of the symptoms and progress of his disease. His bed should be, if possible, a single one, covered with a hair mattress, having on it a rubber sheet, underneath a blanket and a sheet.

A fluid diet, consisting of milk, beef, mutton, and chicken broths, with an occasional egg or some other light, easily digested food may be given. So far, nearly all the authors agree; but upon almost every other subject connected with typhoid fever there are different opinions. Some authors believe firmly in medicines modifying the ailment, alleviating symptoms; others, again, deny absolutely the good of any form of medicament, other than that used to meet immediate indications. The followers of Dr. Woodbridge, on the other hand, believe it is possible to abort early cases, and to cure all those placed under treatment prior to the end of the second week. Still others believe that the system of hydrotherapy, first introduced by Brand, is the only rational treatment, and gives altogether the best results.

In the following pages, therefore, we will take up, as briefly as possible, the various methods of treating typhoid fever, and endeavor to find out which offers the best statistics. In the first place, typhoid fever has a mortality under all of the combined forms of treatment, of about 20 per cent.; in other words, of every 100 patients who develop typhoid fever, 70 get well under any or no treatment; 10 to 15 per cent. more recover as the result of the combined methods of treatment. The advocates of the Brand method claim that under their care from 92 to 96 per cent. get well; Dr. Woodbridge claims that every case treated early by his method recovers. The average of 80 recoveries out of every 100, however, is based upon statistics of thousands of cases extending over many years; the figures given by the advocates of the Brand method embrace those from all the large hospitals of the world; the Woodbridge claims are, unfortunately, based upon a comparatively small number of cases.

The Expectant Plan.—In this method of treating typhoid fever, the patient is simply placed in bed and absolute rest is forced upon him. His dietary is carefully regulated, and his nursing is conscientiously looked after. No medicine, excepting an initial

dose of calomel or castor oil, is given. Cases in which the symptoms are mild, and the temperature low, do well under this treatment. Patients are considered as being treated under this plan in which mild antifebrile remedies are used, or some other remedy like turpentine, which exerts no appreciable effect on the disease, is employed. In the expectant plan, when properly carried out, every effort is made to prevent the spread of the disease by a thorough disinfection of all evacuations, and of all the personal and bed-clothing surrounding the patient. Careful attention should be paid, not only to the evacuations, but to the patient's own cleanliness. His buttocks and anal region are to be conscientiously cleaned with antiseptic solutions after each discharge, and his hands and finger-nails scrubbed occasionally, especially before taking nutriment. I have been told by Dr. Wilson, of this society, that when he had charge of the typhoid-fever patients in St. Catherine's Hospital he treated them mainly on the expectant plan, and they did well, except that he found, at first, a great many relapses among them. He regarded these relapses as reinfections, and instituted the method of disinfection of the anal region, and careful cleansing of the hands, and his relapses ceased.

Milk is the most suitable food for typhoid patients; it should be given at regular intervals to the amount of, at least, three pints every twenty-four hours. It may be mixed with lime-water, Vichy, or barley-water. Beef broth, chicken, oyster, and clam soup may be allowed. Consomme may be exhibited occasionally; tea, coffee, and cocoa may be allowed in small quantities to add relish; water should be freely allowed; ice is occasionally permitted, if the patient is sensible enough to know what he is doing. The juice of lemon or orange may be given, in mild cases, in the early stages. Fruits, as a rule, are contra-indicated, and so, also, is any form of solid food; although, sometimes, somatose, Valentine's meat juice, and bovinine may be used. It is particularly necessary that too much food be not given, for when patients are overfed gastric disturbance and diarrhea almost invariably result; curds found in the stools, where a milk diet is used, either mainly or exclusively, is an indication of overfeeding, and the amount should be lessened.

Expectant Symptomatic Plan.—This is the so-called rational plan. By this method of treatment, it is claimed that the disease is modified so that a larger number of patients recover, and that the dangers from complications are lessened. Whether this is so

or not, is hard to tell, for typhoid fever is found with such widely varying types, with such vastly different results, that the success or failure of any form of treatment must all depend upon the kind, intensity of symptoms, and character of the case. In the expectant symptomatic treatment, as the name implies, symptoms are treated as they arise. Thus, the early insomnia, initial headache, commencing gastric irritability and vomiting, and the epistaxis frequently present in the beginning, as well as the violent delirium, sometimes met with in the first part of an attack, all receive separate consideration and attention, as well as proper treatment, when they arise. Early insomnia may be treated with bromids, or by chloral alone, or with both combined; when occurring with violent delirium, often met with in heavy drinkers, bromids and chloral, and moderate doses of alcoholic stimulants, very frequently give good results. With delirium, approaching stupor, cold affusions to the head, neck, and chest seem, in many cases, to have a happy effect, if not too often repeated; or the warm bath, gradually lowered, may prove useful. Patients with delirium in this disease must not be left alone, even for a moment.

Epistaxis, if not severe, need not be regarded with any alarm, especially if it stops shortly after the establishment of the disease. If, however, it is severe it may be controlled by local applications of ice to the forehead and nose, or to the nape of the neck; by hot-water applications or cotton tampons, moistened, and then rolled in antipyrin; or, if still persistent, the anterior and posterior nares may be plugged with antiseptic gauze.

Stimulants—alcoholic—may be exhibited throughout the course of the disease if it is of a severe type. As a rule, not more than 8 to 12 ounces will be found necessary (unless symptoms of exhaustion occur) in twenty-four hours.

Tremor is a symptom of great gravity. It is usually seen, when it occurs, late in the disease, and is frequently an indication of deep ulceration of the intestine. It is to be treated by alcohol, freely, and opium in full doses, if any suspicion exists of sloughing of one of the patches. Tremor occurs, also, with delirium, in the early stages, in those who have been in the habit of indulging in alcoholic liquors to excess. Care should be taken to guard against mistaking typhoid for meningitis or cerebrospinal fever; and the fact that meningitis occasionally complicates genuine typhoid should not be forgotten. If it sets in as a complication, it should be actively treated by opium in full doses,

the bromids, cold affusion, or the ice-pack to the head, with warmth to the trunk and extremities.

Dryness of the tongue, and sordes of the teeth are best treated by preventing them; and for this purpose, there is no better method than the chlorin mixture to be described later. If, however, they do occur, water in small quantities, ice allowed to melt in the mouth, and cleansing the mouth with tincture of myrrh, as well as the exhibition of the chlorin mixture above referred to, will in most cases overcome them.

Vomiting, when present, is, perhaps, best treated by calomel and cerium oxalate. It usually subsides spontaneously after a few days, if not associated with severe diarrhea or grave asthenic conditions. Occurring later in the disease, it may be a symptom of a renal complication.

Constipation should be overcome in the early stages; later than the second week judgment should be used and harsh cathartics rarely employed. Small enemata of soapsuds and water answer very well. I have found satisfactory results from calomel, and from Geyser Crystals in the early stages.

Diarrhea, if not more than four passages in the twenty-four hours, should not be interfered with. If excessive, opium often readily controls it; but the dietary should always be looked into, and if the kind of food given is disagreeing, or the amount excessive, it should be modified. This is important. Upon the proper feeding of a typhoid patient very often depends his life. If he is over-fed, gastritis and intestinal irritation result; if he is underfed, he will not have strength sufficient to resist the attack, but is apt to die from exhaustion.

Tympanites is commonly met with. It may be due to imperfect digestion of the nutriment taken, allowing decomposition of the same, or it may be caused by profound general asthenia, or by deep ulceration and sloughing of the patches. It varies within wide degrees; sometimes it is but little more than normal, and again is so severe as to distend the abdomen so greatly as to interfere with respiration. When excessive it may be treated with turpentine stupes, increase in alcoholic stimulants, and turpentine, camphor, and minute doses of opium internally; and the chlorin mixture may be used. Carefully introducing a long rubber rectal tube will often relieve the distention of the lower bowels. The consensus of opinion is against puncturing the distended gut with a needle.

Intestinal hemorrhage is to be treated by absolute rest. When

slight, opium in moderate doses is to be given, and food would better be withheld for a few days. Bismuth may also be addsd to the opium for the further purpose of binding up the bowels. Even water is to be exhibited in but small doses, or small pieces of ice may be allowed to melt in the mouth. When hemorrhage is severe, however, more active measures are to be taken. Ice is to be applied to the abdomen, opium should be gradually increased until it shows its familiar symptoms, and the fluid extract of ergot given, preferably hypodermically. Small ice-water enemata may be also used. If exhaustion follow intestinal hemorrhage and threaten life, the normal salt solution, sterilized, may be introduced into the blood by hypodermoclysis. Some authors claim that bathing should not be practised for some days after an intestinal hemorrhage; that absolute rest must be enforced and the diet reduced to a minimum.

Perforation, when it takes place, is ushered in by a sudden, sharp pain in the abdomen, and by the signs, also, of collapse. Opium should be used in full doses, and the question earnestly considered whether or not operative interference is necessary. While the results of operative procedures, in the perforation and peritonitis of typhoid fever, have not been all that we could wish for, still, lives have unquestionably been saved by these measures, and we should not abandon our patients entirely to their fate, which is almost invariably death. Out of forty-six reported cases there have been twelve recoveries.

Peritonitis, whether due to perforation or not, is to be treated by opium; if, however, the stomach rejects it, morphin may be hypodermically used. Ice or heat may be applied to the abdomen; but these applications must not be heavy, for the abdomen is very tender and patients will readily complain of any pressure. Being mindful of the dangers of perforation, physicians should use the utmost care in making abdominal examinations. Collapse ocurring from any cause is to be treated by absolute rest and freedom from disturbance; the head should be lowered, heat applied externally, and injections of strychnia, morphia, or ether, or solutions of camphor in ether used. Caffein and stimulants, in full doses, may be exhibited whenever signs of exhaustion appear.

The bladder should be looked after. If retention of urine occcur, relief can be given by the use of the catheter.

Hypostatic congestion of the lungs and bed-sores are to be guarded against: the first by keeping up a good heart action,

and occasionally changing the patient from side to side—he must not be allowed to do it himself; and the second, by careful attention to the smoothness of the clothes and bedclothes. These are rare complications in properly managed cases.

It is the rule with all the methods of treatment to pay no attention to the fever if it does not rise above 103° F. If it rises higher than that nearly all authorities believe it should be reduced. It is a well-known fact that many patients recover after even excessively high temperature. I have myself seen a patient recover whose temperature reached 106° F. on two separate occasions; and a temperature of 105° F., occurring during the course of the disease, is not necessarily an alarming symptom, if not long continued nor accompanied by severe nervous symptoms. It is persistent, high temperature that is dangerous; prolonged intense fever, with only slight morning remissions, is almost invariably followed by a fatal issue. The use of medicinal antipyretics has almost entirely been abandoned; and, in my opinion, justly so. In the opinion of almost the whole of the medical profession throughout the world there is no specific for typhoid fever, no drug which can certainly control the fever. Quinin possesses some slight power to lower the temperature of typhoid fever, but is not effective against hyperpyrexia. The coal-tar products exert but a temporary effect upon the temperature and are probably harmful in other ways. Some years ago the writer received a pamphlet lauding the action of lactophenin in typhoid fever and pronouncing it almost a specific for this disease. The pamphlet purported to be written by a well-known German professor, who claimed that any stage of the disease would be benefited by it. Believing in the written words, I tried lactophenin on four cases of typhoid fever at the Norwegian Hospital; two of the patients died after two-days' treatment; the other two survived the treatment for those two days, and recovered later under our old established form.

Temperature may be reduced by the external application of water—either applied by sponging or by means of the wet pack; and by cold compresses and the use of Leiter's coils. Children are best treated by sponging with alcohol and water. Water cooled to the temperature of the room, or water still further cooled with ice, may be used, though it may be mixed with alcohol, Labarraque's solution of chlorinated soda, or vinegar. The bed should be protected by a rubber sheet, and each limb taken, sponged quickly, and rapidly dried without extra friction; and

the same with every other part of the body. These spongings may be repeated every three, two, or one hour, according to the severity of the case, and the effect on the temperature.

Cold compresses are used by soaking cloths in cold water and applying them to the forehead, trunk, and abdomen, care being taken to change them when they become warm. Leiter's coils are placed upon the head, thorax, or abdomen. They are thin rubber tubes, and are filled with water from a tank or reservoir above them. They only exert a local influence and are useful sometimes in intestinal hemorrhage.

The cold pack is given by placing a blanket upon a bed, and then laying a wet sheet upon it. The patient is lifted into the wet sheet, and it is then wrapped about him, covering every part but his head. The cold pack has to be repeated often; but if its action is unfavorable it should not be soon used again.

The cold bath, or one gradually cooled, used occasionally, is of great advantage. Ice-water enemata sometimes reduce temperature.

Thrombosis of the femoral vein should be treated by the application of a flannel bandage from the toes to the groin, and the leg should be elevated. Later, massage may be useful.

Patients, convalescing from typhoid fever, should not be allowed to eat solid food until the temperature has been normal for at least one week—some authorities think even longer. The convalescent stage of typhoid fever should also be carefully attended to by the attending physician. The weakness resulting from the disease, the occasional bone trouble left behind, and rarely the tendency to loose bowels or the contrary constipation require, and should receive, intelligent treatment.

Neuritis and irritable spine, mentioned by many authors, are also items of interest which require careful management.

Systematic Cold-water Bathing (Brand method).—In 1861, Brand of Stettin first published his observations upon the use of cold-water bathing in typhoid fever. The method grew slowly in favor, until, at the present time, it is the favorite remedy for this disease of the vast majority of our most scientific physicians all over the world.

It consists in the systematic giving of a cold-water bath every three hours to every patient whose temperature rises above 102½° F. The water has a temperature of 70° F., but it may be as cool as 65° F. when the patient has become used to it. While the patient is in the bath the attendants rub his skin

gently with their hands, or with bath-gloves. He is kept in the water for from ten to twenty minutes; average, about fifteen. In the large hospitals, a bath-tub on wheels is provided, and the patient has only to be lifted from his bed into the bath-tub, and when bathed, is lifted back into bed again. His clothes are taken off under the bed coverings before he is placed in the bath, and some time during the bathing, or immediately after it, he receives about an ounce of whisky. In some hospitals the beds are wheeled to the bath-tub so that the patient is bathed with the least amount of exertion. In private practice it is not so easy to use the Brand method; but it should be possible to use the tub of Dr. Batt, which is a collapsible and portable bath-tub, which aids materially in giving the cold-water treatment. Upon entering the bath the patient begins breathing deeper; at first the sensations are agreeable, but after six- to twelve-minutes' immersion, he begins to feel cold, shivers, and gets blue about the lips and extremities. He should then be taken out and placed again upon the bed, which is usually prepared while he is in the bath by placing a rubber sheet upon it, then a blanket, and then an ordinary sheet, and wrapped up in the bedclothes. The effect of the cold-water baths upon the temperature is marked, a lowering of the fever of from 1° to 4° F. being noticed by rectum fifteen minutes after the bath is over. There is, too, decided improvement in all the other symptoms—the respirations become deeper, the pulse fuller and stronger, the mental hebetude is less in evidence, and all of the symptoms are alleviated. Complications are less frequent and less severe, excepting, perhaps, that more relapses are noted; but it has been suggested that more relapses are found because there are more patients left living to have them.

There are abundant statistics to prove the utility of the Brand method of treating typhoid fever. I will not weary the members by repeating a mass of figures, but I will simply take an extract from the "Treatment of Enteric or Typhoid Fever," in the "American Text-book of Applied Therapeutics," by Dr. J. C. Wilson:

"We note, that of 32 cases admitted prior to the fifth day (treated, of course, by the Brand method) 1, or about 3 per cent. terminated fatally. In 78 cases admitted prior to the tenth day the death-rate was 7.7 per cent.; and in 18 cases admitted after the tenth day the death-rate was 22 per cent." Thus, out of 128 cases, which he reports as treated in his hospital—the German Hospital of Philadelphia—11 died, giving a mortality of about

9 per cent. In 408 cases treated in that hospital by systematic cold bathing, however, but 32 died, giving a mortality with the Brand method of 7.8 per cent.

Antiseptic Treatment.—Any number of drugs have been given with an antiseptic object in view. Quinin, salol, carbolic acid, iodin, chlorin mixtures, calomel, boric acid, turpentine, oil of eucalyptus, thymol, camphor, napthols and naphthalene, bismuth subgallate, menthol, and many other drugs have been mentioned and used, but few of them have stood the test of time. Quinin is not now believed to exert any specific effect upon the course of typhoid fever; it, perhaps, has a slight tonic effect. Calomel, given in laxative doses, does seem to do good in the early stages—given earlier than the tenth day. I do not think its action superior to that of any other gentle laxative. The naphthols and naphthalene have been very lamentable failures. Bismuth subgallate has been largely abandoned; boric acid and camphor are not now heard of any more in the treatment. Carbolic acid and iodin have no large statistics behind them showing influence upon the death-rate. J. C. Wilson says: "There is no evidence to show that any of them" (the antiseptics) "or any combination, persistently administered throughout the course of the disease, is capable of favorably modifying the toxemia, or of uniformly abridging the duration of the attack, or notably reducing the death-rate in large series of cases." Osler says: "Typhoid fever is not a disease to be treated by medicines."

The chlorin quinin mixture of Yeo is made as follows: Into a twelve-ounce bottle put 15 grains of powdered potassium chlorate and pour in 60 minums of strong hydrochloric acid. Fit a cork into the mouth of the bottle and keep in until it has become filled with a greenish-yellow gas. Then fill the bottle up with water, adding a little at a time and shaking the bottle well at each addition. You then have a solution of free chlorin, together with some undecomposed potassic chlorate, and free hydrochloric acid. To 12 onces of this solution from 24 to 36 grains of quinin and 1 ounce of syrup of orange peel are added. Of this, 1 ounce is given every one, two, or three hours, according to the severity of the case.

Yeo claims the following good effects: "(1) A modification and sustained depression of the febrile temperature. (2) An abbreviation of the average course of the fever. (3) A remarkable maintenance of the physical strength and intellectual clearness of the patient, so that there is less need of stimulants. (4) A re-

markable cleaning of the tongue. (5) A greater power of assimilating food. (6) A deodorization of the evacuations. (7) A more rapid and complete convalescence.

I can substantiate many of these views; but I have this criticism to make: This method of treating typhoid fever is not new. I have been connected with the Norwegian Hospital of this city since 1886, and upon my first connection with it, I found in use there by Dr. H. C. Turner, whose assistant I have the honor to be, a chlorin mixture very similar to that employed by Dr. Burney Yeo. Our "acid mixture," as we call it, is made by dissolving 2 drams of potassium chlorate and 1 ounce of simple syrup in 7 ounces of water, and then adding 40 minims of hydrochloric acid. The syrup of orange peel and quinin are not used, but the mixture is for all practical purposes the same. Besides the exhibition of this remedy we used the wet pack every two or three hours, or cold sponging when the temperature rises above 103° F. Our patients do show many of the good effects claimed by Yeo for his formula, but I do not believe it shortens the course of the disease one hour. We have had 35 patients in our hospital up to the 1st of November of last year; of these, 3 died within twenty-four hours of entrance, 1 died in four days, 1 in five, 3 in six, 1 in eight, 2 in ten, and 1 in fourteen days after admission.

Eleven died and 20 became better; 2 are still in the hospital, but are convalescing—eating and walking around. Under the chlorin treatment the tongue is clear and digestion better than without it; stupor is almost entirely absent, and when our cases are not moribund when we receive them, or if we receive them early, our results are good, though I believe the majority of our patients are not physically capable of standing as much hardship as those of other nations. The vast majority of our patients are Norwegians. For food, our cases get milk and barley-water. Of course, symptoms are treated as they arise, and every effort is made to save as many lives as possible. The Brand method is not used, because our nurses are all females, and our staff is small; but yet, if you take the cases out which come in moribund, or in the latter part of the second, or during the third week, our death-rates will compare very favorably with even that of the Brand method. Every method of treatment depends largely upon the day of the disease it is commenced.

Salol has almost been abandoned. Turpentine is still in use, rather as a general and local stimulant than anything else. Thymol has been used for its so-called antiseptic qualities. It

has been lauded highly. Yeo states: "It is insoluble, and thus it is certain to reach the small intestine."

Calomel, thymol, menthol, and eucalyptol enter into the composition of the remedies used by Dr. Woodbridge. The method of Dr. Woodbridge consists of three different recipes; two in tablet form, and one in capsules:

Formula No. 1:	Resin podophyllum,	$\frac{1}{960}$ gr.
	Hydrarg chlor. mit,	$\frac{1}{16}$ "
	Guaiacol carbonate,	$\frac{1}{16}$ "
	Menthol,	$\frac{1}{16}$ "
	Eucalyptol,	q. s.
Formula No. 2:	Resin podoph.,	$\frac{1}{960}$ gr.
	Hydrarg. chlor. mit.,	$\frac{1}{16}$ "
	Guaiacol. carb.,	$\frac{1}{4}$ "
	Menthol, Thymol, } aa	$\frac{1}{16}$ "
	Eucalyptol,	q. s.
Formula No. 3:	Guaiacol carb.,	3 gr.
	Thymol,	1 "
	Menthol,	$\frac{1}{2}$ "
	Eucalyptol,	5 mm.

Formula No. 1 is given every fifteen minutes for forty-eight hours; after twenty-four hours tablet No. 2 is given also every fifteeen minutes until five or six good movements are obtained, when they may be given less frequently; or formula No. 1 may be stopped entirely, and the medication continued with only No. 2. After three or four days the capsules only are given. The author of this treatment claims not only that it will cure these cases, but that it will abort them—cut short the fever and make it but a simple thing to treat. He supports his claims by saying that he has treated typhoid fever by this method without a death except two, which he first saw when moribund. He also claims in his book, "Typhoid Fever and Its Abortive Treatment," that one patient whom he had treated by his method, and who died shortly after from intussusception, showed, on *post-mortem* examination, the intestines and Peyers' patches in a state of resolution. He has some supporters among members of the profession in various parts of the country.

My experience with the Woodbridge treatment is limited to one case. On October 1, 1897, the "Yumari," of the Ward Line of steamers, left New York for Havana, Tampico, and Campeche,

Mexico. A deck-boy was sick with fever, vomiting, and diarrhea. There was no doctor on the steamer, I am told; the boy died just before reaching Tampico and was buried at sea. After his death about one dozen of the crew, including the engineer, were taken sick and all suffered with the same sickness—fever, vomiting, and diarrhea. The "Yumari" arrived once more in New York on October 28th. On October 31st I was called to one of the crew, and found him with a temperature of 103° F., with excessive vomiting, and some diarrhea. He also had a slight bronchitis, and there were four rose-spots on his abdomen. He told me he had felt sick for nearly two weeks before the vessel's arrival in port, but that he had been real sick a week before he landed. I placed him upon $\frac{1}{12}$-grain of calomel and 5 grains of oxalate of cerium every three hours. I also gave him a 5-grain quinin pill every four hours. The next day his temperature was 102° F., in the morning, and in the evening $102\frac{4}{5}$° F. His temperature continued about the same for four days. On Wednesday, November 3d, I placed him upon the Woodbridge treatment, formula No. 2, one dose every hour. On Monday, November 8th, his temperature was normal, and has stayed normal ever since. Now, what did it? Was it a spontaneously aborting case, or did the Woodbridge treatment do it? Or was it some other fever? There was no epistaxis and tympanites; but his fever and his stools were typhoidal. Quinin did not touch his temperature, but it fell immediately upon receiving the Woodbridge treatment. As an additional reason to believe I had a case of typhoid fever was the fact that the man lost excessively in weight, so that even when his fever had gone for more than a week his underclothes were too big for him. It is possible that he had been sick for the full period which typhoid runs; but, according to my calculations, he was actually suffering from the disease but seventeen days, altogether.

I have another case which tells rather against the Woodbridge treatment. At least, it may be used as an argument to show how fallacious sometimes our diagnosis is. On Friday, November 5, 1897, I was called to a young man about twenty-three years of age and found him suffering with fever and wild delirium. He had no cough and no expectoration; temperature, 103° F.; pulse, 96; respirations, 36. Careful examinations of the lungs negative; heart and other organs sound. Occasional vomiting, nasty taste in the mouth, inclined to constipation. Patient known to me to be a heavy drinker. Complained of inability to sleep.

Next day delirium noisy, but patient easily controlled. He had been given chlorid of ammonium, tincture of nux vomica, and syrup of wild cherry for his stomach, bromid and chloral for his delirium, and quinin for his fever; but he was no better. Pulse and respiration remained the same, but temperature dropped to 102° F. Still could not sleep. Continued in practically the same condition until the ninth day, when he suddenly fell asleep for the first time, slept nine hours, and woke up with a normal temperature, which he has retained ever since.

Was this an abortive case of typhoid fever; or was it a case or malarial fever with alcoholic delirium? The lungs were repeatedly examined, with always negative results. Of course, in each of these two cases, examination of the blood would have completely settled the diagnosis; but very few of us have a bacteriological laboratory in our offices, and it is not always possible to go to those who have. The second case did not receive any Woodbridge treatment, but is now convalescent on the treatment outlined.

The Woodbridge treatment, therefore, stands in the position of "not proven;" but there are only generalities urged against it. No man whose word is accepted by the profession, has, to my knowledge, condemned the treatment after a thorough trial of it. In view of the fact that no known drug is a specific for typhoid fever, that calomel and thymol are admittedly beneficial in this disease, and that with the Woodbridge treatment hydrotherapeutics are not contraindicated, why does not the profession take up this method and after giving it a thorough trial either endorse or condemn it?

Typhoid has been treated by injections of dead Eberths' bacilli in sterilized bouillon. Fifty-seven cases thus treated show a mild course, with remissions of the fever. This method was introduced by Fraenkel and Manchot.

Rumpf has treated cases with sterilized cultures of the bacillus pyocyaneus in thymus bouillon, with results similar to that obtained by the typhoid bouillon.

Hamerschlag treated cases by transfusion of the blood from convalescent cases; but the results are not conclusive.

Klemperer and Levy have attempted to obtain a typhoid antitoxin by treating dogs with gradually increasing amounts of bouillon culture of typhoid bacilli. Five patients were treated with this, and all pursued a mild course.

In review of the whole subject the following facts stand out unmistakably.

Rest in bed is the first essential in the treatment of typhoid fever. In all the methods of treatment it is insisted upon, and the earlier in the course of the disease it is undertaken and the more thoroughly it is carried out the greater the percentage of recoveries which take place.

Next in importance is careful and intelligent nursing, which, of course, includes proper feeding. Third comes some method of hydrotherapy, the best of which, by all authorities, is the Brand method of cold-water bathing; and last, though not by any means least, comes careful and intelligent watching by the attending physician, who must ever be on the alert against the complications of the disease.

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DISCUSSION.

Dr. H. A. Fairbairn: In discussing a paper of such wide scope as that just read, all that one can do is to state the method he has adopted and the basis on which he rests his faith in such method. To be brief:

First, I believe in the control of the temperature by bathing. I believe that it is the best method offered, for it is the one which improves the nutrition of the patient; at the same time it holds in check the serious symptom, fever. The sponge-bath is my favorite method. The Brand method, tub-bathing, in my experience, is difficult of application and dangerous, if not attended to by skilled attendants. Ice-water enemas administered by rectal tube hold the second place in my experience. They relieve the congestion of the portal system and stimulate the renal function; at the same time they make a profound and long-continued impression on the temperature.

Secondly, I believe in the employment of the so-called intestinal antiseptics, not with the intent of destroying the infective bacillus of typhoid fever, which has its habitat deep down in the lymphatic system, in the solitary follicles, the mesenteric glands, the Peyer's patches and spleen, but with the intent of disinfecting inflammatory products, and products of putrefaction and fermentation, which are present in large numbers in the course of this fever, which diminishes the digestive secretions and diminishes their power of properly performing their work.

It has appeared to me that the symptoms of the third and

fourth week are due largely to the absorption of these products, and the presence of the ulcers found at this stage.

The occurrence of parotiditis, erysipelas, and periostitis, etc., shows secondary infection. It makes us suspicious of the entrance into the system of certain bacteria which are found in the intestine. We are led to cite the example of secondary infection the obstetrician produces when he exhibits to us the streptococcus as a saprophyte, under ordinary circumstances a scavenger, and a virulent germ where there is trauma and lowered vitality of tissue.

Again, in support of this view of the symptoms during the third and fourth week, we can produce the picture of typhoid as it appears in infants and very young children. In them it rarely runs a course longer than two weeks; the intestinal lesions are very mild and the mortality small. It appears to me that in the infant we have the prototype of the effect of the typhoid bacillus on the human system.

Again, if we seek the period of greatest danger in this fever in the adult we find it to be at the close of the third week when the intestinal lesions are marked. We, find, also that death rarely occurs before the fourteenth day, *i. e.*, before ulceration occurs in the intestine. We are brought face to face with the importance of the intestinal involvement from whatever point we study the disease. Dr. William Osler of Johns Hopkins University, in the face of the long line of testimony, and able testimony, in favor of the antiseptic method, is disposed to scout the treatment. He announces that he cannot speak from personal experience, and then proceeds to arraign it as illogical unless it can be demonstrated that the disease is an intestinal toxemia. He says, moreover, that he can find no evidence that the bowel can be rendered aseptic. We answer that in the last two weeks of the disease an intestinal toxemia is a prominent factor, and if he were not so careful to direct attention to the nidus of such toxemia by careful regulation of diet, a powerful intestinal antiseptic of itself, his Brand treatment alone would develop that fact. The advantage of unirritating diet is well illustrated in the case of the infant, by the mild lesions found in its intestine in this disease.

His statement that the bowel cannot be made aseptic strikes me as absurd. Who would attempt to make it aseptic when its function is to excrete septic material. There is the strongest evidence that intestinal antiseptics will make it very much less septic, the marked decrease of the toxicity of the urine at the

same time adding additional evidence of the efficacy of the measures.

Thirdly, I believe the amount of food administered should not be large. I believe that much trouble arises from too frequent and too generous feeding of these patients. Time and again have I seen a reduction in the quantity followed by improvement in the symptoms. It is impossible to digest large quantities of food in this fever. The administration of such quantities must leave a surplus to ferment and putrefy, with a train of symptoms superadded. It is judicious to substitute meat juice and white of egg for the time-honored milk diet, where curds appear in the passages. The proposition to give ordinary diet strikes one as venturesome and unphilosophic in the light of the experience such excursions have furnished in this disease, and others, marked by intestinal disorder.

We should take care to remove excrement; small doses of calomel, magnesium sulphate, and enemas are the agents to relv on. Retained fecal matter is a danger to avoid.

Dr. Glenworth R. Butler: The hour is so late that I shall be very brief in what little I have to say. I, as others, have been greatly interested in Dr. McManus' paper. It is a subject of perennial and painful interest to us all.

I desire to endorse particularly Dr. McCorkle's views in regard to having a good nurse, or, better, two good nurses. I think that good nursing goes a long way toward the successful management of typhoid fever. In regard to the importance of rest, I have noticed in several cases of so-called walking typhoid, the very marked influence of rest upon the temperature of the body. I can recall at least half a dozen cases where walking cases were found with a temperature of 104° or 105° F., and simply putting them in bed without administering medicine, wet packs, or antipyretics of any kind, has caused their temperature to drop down to 102° F., and stay in the neighborhood of that point. It illustrates so excellently the value of rest in the treatment of typhoid fever that I desire to make mention of it. Personally, I have in the last three or four years become decidedly in favor of the bathing treatment of typhoid fever; not, however, omitting intestinal antisepsis by the use of salol, or the carbonate of guaiacol, or subnitrate of bismuth, or betanaphthol. At first, like every one else, I presume I adopted this method very cautiously and with some fear, and I first carried it out in my hospital service. The limit of temperature for giving the cold shower,

at present, is 103° F. instead of 102½° F., and in many cases even that temperature does not demand the cold bath unless the nervous symptoms are prominent.

The object of the cold bath is, it seems to me, in many cases, misapprehended. It is not simply to reduce temperature; that is an incidental and subsidiary advantage. The object is to counteract the effects of the typhoid-fever poison upon the nervous system, as indicated by the delirium, by the subsultus, by the dry, brown tongue; and the striking features about the cases which have been treated by tubbing is the absence of the symptoms which get their name from typhoid fever; in other words, the absence of the delirium, the absence of the dry, brown tongue, the absence of the subsultus. So much is this the case that in showing one of my friends the other day five cases in my service being treated at the time by cold bathing, he expressed some doubt as to the diagnosis because of the absence of all the typhoid-fever symptoms. By typhoid-fever symptoms he referred to the tongue, the delirium, the subsultus, and the tremor. While the treatment is not carried out to its very strictest extent, the results have certainly been extremely satisfactory. One case which is now thoroughly convalescent, had a temperature of 104½°, 105°, and 105½° F., latterly, and came in on the third or fourth day of the disease. She ran the usual length of time, twenty-eight days, but at no time had any delirium, any tremor, nor the least dryness of the tongue. That has been the case with others of the same severity. The object of this treatment is mainly to counteract—I would like to repeat it again—the influence of the typhoid-fever poison upon the nervous system. My experience refers to many cases which I treated without the cold bath, and I must confess that as I look back I can see a very distinct improvement in the general condition of the patients, and in the mortality.

This does not exclude all the other methods of treatment which have been found of service—the antiseptics, the careful diet, meeting the symptoms as they arise. The contraindications are certainly not many. Peritonitis, hemorrhage, or perforation, of course, absolutely contraindicate the bath. The cyanosis which so frequently follows the bath is not necessarily a contraindication. If you remember the number of people you see at watering-places in summer who remain for half an hour in water at a temperature of 66° F., and come out with blue finger-nails, toes, and faces, and yet are in excellent condition as a re-

sult of the cold bath, one loses the natural fear which one feels at first when seeing cyanosis produced by the bath. I do not want you to understand that I am a rabid advocate of cold bathing. For the milder cases, sponging or the wet pack is quite sufficient; so, also, it must be in many cases in private practice because of the natural prejudice against the treatment, the expense, and the constant presence of skilled attendants which is required.

The Woodbridge treatment I know nothing about, but I must confess that I prefer to secure my statistics from hospital sources rather than the scattered few cases of private practitioners, whose diagnostic ability is an unknown quantity.

There is one point which, perhaps, is not insisted upon as much as it might be in any consideration of this question, and that is that there is a frequent uncertainty in the diagnosis of typhoid fever. It is not that a typhoid-fever case is not recognized, because that is very rarely, if ever, the case, but the element of uncertainty lies in the fact that very often other conditions are diagnosed as typhoid fever. I presume that all of us can remember cases in which, at first, we were willing to make a pretty positive diagnosis of typhoid fever, and in which the subsequent developments proved that that diagnosis was a mistake. Personally, the more I see of typhoid fever the less willing I am to pronounce *ex cathedra* that it is typhoid fever.

The use of the medical antipyretics I was very glad to hear deprecated by Dr. McManus and Dr. McCorkle. and I think, also, by Dr. Fairbairn. The coal-tar antipyretics certainly should not be employed because their effect is altogether for the bad. In the use of quinin another point which occurred to me is this: that it is not a bad practice at the beginning to give one or two pretty large doses of quinin; enough, certainly, to cause some symptoms of cinchonism; because, in the cases which come in from time to time, one or two doses of quinin will convert the diagnosis of typhoid fever—which may be very plausible—into one of malarial fever; that is, in the course of a couple of days the temperature comes down to normal, and stays there, and an examination of the blood shows the presence of the plasmodium of malaria.

With reference to the eliminative treatment of typhoid, *viz.*, by purgatives, the fact that the cases attended by severe diarrhea do not do well, has seemed to me a potent argument against the practice.

Dr. C. F. Barber: Mr. President, it is so late, and the ground

has been gone over so very thoroughly by the previous speakers, that I do not care to take up very much time. The gentlemen probably are all anxious to get home; but I would like to say a word or two about the Woodbridge treatment. Perhaps Dr. McManus can correct me if I am in error. Dr. Woodbridge makes some strong claims for his treatment, but most of the statistics gathered are from men in the West and Southwest, and many of these cases have unquestionably not been typhoid fever. He also says, I believe, he does not care whether it is typhoid fever or not, so long as it is a continued fever, and he treats all by the same method. With such data I do not think we can rely very much on his methods of treatment. Certainly his results appear good, but otherwise than that we cannot depend on treating typhoid fever on such a basis. He claims less than two per cent. mortality.

There is one other point, and that is regarding the treatment where perforation has occurred. Dr. Wilson, I think, of Philadelphia, was the first man to call the attention of the profession to operative measures under such circumstances. He was brave enough to go into the abdominal cavity and endeavor to close up a perforation, and by that means attempt to save life. The results of such treatment, of course, have not been good; they are not encouraging; at the same time other men of experience—Wiggins, Abbey, Hutchins, Hotchkiss, and some others—have all done this operation under the most trying circumstances, and some cases have recovered. They make no hesitancy in rapidly opening the abdomen and getting out what blood they can, or all, if possible, and closing up the rent in the intestine; examining the intestine carefully at the same time. Most of them agree that the normal salt solution should be used pretty freely when this operation is performed. Of course, if a patient is moribund, there is no use of endeavoring to do anything further, but where you are quite sure that perforation has occurred and where there is any chance whatever of saving the patient's life, it is certainly no more than right to take the desperate risk and open the abdomen, find the rupture, and close it. We all know that patients with typhoid fever have had their abdomens opened, where a mistake in diagnosis has been made and appendicitis has been suspected; the patient has been removed to bed and gone on making a good recovery from the typhoid fever. That is well known. And, therefore, if that can be done, and we are immediately on hand when a perforation has taken place, although there is great

shock attending it, we may go at once into the abdomen and save some lives, as has been done in the past. It is worth bearing in mind.

Dr. A. T. Bristow: Up to March of last year there had been recorded 52 cases of operation for perforation in typhoid fever, and of that number 17 recovered, being 32 per cent. In the light of such statistics it is hardly fair to say that the operative results have not been encouraging. We should regard such a record as very encouraging in conditions very much less desperate than the perforation of typhoid fever.

Perforation occurs, according to Fitz of Boston, in between 1 and 2 per cent. of all cases of typhoid fever, and between 6 and 7 per cent. of fatal cases die of perforation; 80 per cent. of those die in the first week, and without operation they practically all die. Of the 52 cases that have been operated on up to date, but 6 of them were in a favorable condition when operated on. That has some bearing in regard to the propriety of operating in an apparently hopeless case. If only 6 of these were in a favorable condition at the time of operation it shows that we can sometimes get recovery by performing the operation in an apparently hopeless case, for we all know that the perforative lesion of typhoid fever means death when left alone. There is, therefore, nothing to be hoped for from expectant medical treatment.

I would like to say a word in regard to the relation of perforation to the character of the disease. We should expect this accident to happen only in the severe cases, but that is not true; mild cases with perforation are frequent. Nor is it true that children never suffer from perforative lesions of the ileum or large intestines. Two of the 52 cases operated on for perforation were children. Therefore, to sum up this phase of typhoid fever from the surgeon's standpoint: Cases of perforation all die under medical treatment. A sufficiently large number of cases of perforation have been operated upon for us to form reasonable conclusions as to the utility of the operative treatment. The percentage of recoveries after operation is, excluding certain doubtful cases of the 52, 25 per cent. As only 6 of this series of cases were said to have been in good condition prior to operation, surgical relief may properly be offered to patients even when their condition is distinctly bad.

Dr. James McManus: Mr. President, Dr. Woodbridge claims in his treatment he does not have any percentage of deaths; he claims to cure every case. Regarding the operation for perfora-

tion, Dr. Bristow probably saw some other statistics than those I saw. The ones I saw in the *Annals of Surgery* showed 46 cases reported, with 12 recoveries; that was in March of 1897. Certainly cases are saved by the operation, and without operation they very seldom, if ever, recover, and I think the operation should be considered and performed in every case of perforation unless the patient is dying.

THE OPERATIVE TREATMENT OF HYPERTROPHIED PROSTATE.

BY HENRY WALLACE, M.D.,
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Read before the Brooklyn Surgical Society, December 2, 1897.

The subject which I present for your consideration to-night is one which has always interested me, principally, no doubt, for the reason that my own knowledge of the subject has been on a very uncertain footing. The literature, in text-books at least, has been rather meager. There is a chance for considerable difference of opinion, especially as to the treatment of this condition, and to my mind it is only by the hearing of varied experience and opinion, combined with personal experience, that any one man can feel reasonably sure of his ground.

With the signs and symptoms of this condition we are all more or less familiar, as, also, with its differential diagnosis.

As to the pathology: It is non-inflammatory, as it possesses none of the characteristics of an inflammatory new formation. It has been attributed to atheromatous changes and to the variations from the normal which we find in old age, but this will hardly cover it, for cases have been described in men in their thirties.

There develops gradually an adenomatous or fibro-adenomatous state of the gland, minus the orderly arrangement of the tubules and acini.

Depending on the comparative amount of fibrous and adenomatous elements in the growth, do its physical characteristics vary?

There may be a uniform and equal development of the fibrous and glandular elements, or one or the other may be greatly in excess.

Socin described the enlargement as due to a myomatous or a fibromyomatous development.

There may be muscular fibers, but probably, as Moullin says, they were long connective-tissue cells, or fibrous material.

That true myomata do occur in the gland, as, also, sarcomata is undoubtedly so.

The density of the gland may be very great from the presence of fibrous tissue compressing and causing a disappearance of the tubular portion, and yet the size of the organ may be but little changed.

Then, again, we find circumscribed tumors in various parts of the gland.

When the adenomatous elements are in the ascendant, the size of the organ increases greatly; to the size of an orange or even a cocoanut (Thompson).

The posterior median portion of the so-called third lobe is most frequently involved. One or both lateral lobes are frequently hypertrophied, and, except by elongation or lateral compression of the urethra, do not cause as much trouble as an enlarged third lobe, or the growth of a valve-like projection into the urethra. The lateral lobes, if very large, may project into the bladder, causing a bar of tissue consisting either of mucous membrane or of prostatic-gland tissue. Another form of prostatic overgrowth, and one which is practically impossible to diagnose by rectal touch, is in the form of a circlet, or constricting ring, at the entrance to the urethra.

As a result of these varying forms of hypertrophy resulting in an incomplete emptying of the bladder, we find cystitis, sacculations of its wall, a pouch behind the gland, residual urine, and the further and more serious results of these conditions. Not all persons who have an enlarged prostate suffer, and the over-development of the gland may progress for years before the urinary symptoms call attention to the fact that something is wrong. Then the surgeon finds, by urethral and rectal examination, an enlarged prostate, and the catheter reveals from two to six or more ounces of residual urine.

Sir Henry Thompson states that prostatic hypertrophy occurs in about one-third of the number of those who pass sixty years of age; probably, however, not more than one in ten suffer from it. Given such a case, what are we to do? These are most certainly surgical cases, yet are often treated by physicians as cystitis, pure and simple, when a careful examination would reveal

the true condition: The presence of residual urine and very possibly stone.

Varying with the degree of advancement, the treatment may be classed as methodical and operative.

Let us exclude the former, for every general practitioner is more or less familiar with the treatment of the cystitis by internal medication, irrigation, and the institution of catheter-life, and commence with the subject in hand.

When shall we operate, and which procedure shall we select? The first may be answered by the statement, nicely put, by J. Wm. White, on "Approaching Breakdown in Catheter-life." After a certain time in the period of catheter-life the bladder loses its contractility, the cystitis becomes worse, and catheterism becomes necessarily frequent and painful, and at times attended with hemorrhage.

As a result of this stagnation and infection, and the presence of mucus and pus in the bladder, we not infrequently find one or more calculi, usually phosphatic, either in sacculations of the bladder wall, or in the pocket behind the prostate. Later on disease of the kidneys, from back-action in the urinary current, commences, and uremic conditions develop. The patient is worn out from pain and loss of rest from the continued desire to urinate.

The *operative treatment* may be briefly divided into two classes: Palliative and Radical.

Under the first comes the method of treatment known as drainage; also, the maintenance of the urethra by the passage of sounds. The largest instrument that can be employed should be passed at intervals of about five days, and allowed to remain for ten or fifteen minutes. The good effects of this procedure are due to a diminution of the congestion and local edema; also, probably to some atrophy of the superficial layers of the gland-tissue.

As to *drainage:* In cases where a septic cystitis has progressed and fails to be controlled by lavage, and the manipulation becomes very painful, the patients in time show symptoms of incipient uremia and septic absorption, leading to a general breakdown of health and strength. The urine is in a fearful state of putrefaction; the bladder eroded and coated with a deposit of mucus, pus, and phosphates (and we all know the horrible odor these conditions cause).

It is here that we must drain, and permanently. I might re-

mark here that these symptoms differ greatly in the period of their development.

The urethral mucous membrane shows a remarkable personal equation in its susceptibility to infection. Also, patients themselves vary greatly in their attention to cleanly catheterism. One man will keep his instrument clean in a solution, or boil it; another will take absolutely no care of his catheter, and will use it long after it should have been thrown away.

Shall we open the bladder above the pubes, or incise the perineum, to establish drainage? The former route (suprapubic) has the decided advantage of enabling the patient to take better care of himself, and with an apparatus either to act as a plug, or combined with a cup to drain the urine into a rubber receptacle, may be fairly happy and comfortable.

I have a patient now, whom I see occasionally, who has worn one of McGuire's aluminum plugs for over two years with comparative comfort.

This man was operated upon by the late Dr. Rand for a very large stone and a large prostate by the suprapubic route. He developed a perineal fistula from abscess, leaving him with both a suprapubic and a perineal vesical fistula.

After Dr. Rand's death I made an attempt to close the upper wound by vivification and suture, combined with perineal drainage. A failure resulted, and it was decided to resort to permanent drainage.

I made a permanent suprapubic fistula, controlled by a McGuire aluminum plug, and closed the perineal opening.

The patient voids his urine partly by catheter and partly by the fistula. By doing this every three or four hours he avoids overflow and its attendant nastiness. He also possesses, and occasionally uses, a cup-shaped, hard-rubber receptacle which drains into a rubber urinal strapped to his leg. I might add that in this case it was fortunate that the primary operation was suprapubic. The stone which was encysted had not been discovered previous to operation, although searched for by several most competent men. By cystoscopic examination, I remember, that Dr. Rand saw the outline of the mass, but could not feel sure whether he had a tumor or a calculus to deal with.

The stone proved to be very large, and would have been removed with difficulty even by a crushing operation, if the perineal route had been chosen.

To return to the subject of permanent drainage: The most

simple method consists in fastening into the bladder a rubber catheter to connect with a rubber bag or urinal.

McGuire, in 1890, made a new urethra, as follows: The bladder was opened low down and all but the upper portion of the abdominal wall closed, giving a canal two or three inches long, extending obliquely through the abdominal wall. Dr. McGuire hoped to do without a plug of any sort when he devised this operation, but found that patients could not get along comfortably without one. In the same year Morris of New York brought forward another expedient. He formed a new urethra by dissecting from the lips of the abdominal wound two strips of skin, which he drew down and attached to the bladder opening, thus forming a new skin-lined urethra.

The suprapubic method of drainage is, of course, less practicable, or, as McGill says, "contraindicated" in those cases where the bladder is contracted, and its wall hypertrophied and unyielding.

It is unnecessary to enter into the technic of perineal drainage here, as it will be mentioned under the subject of "Perineal Prostatotomy." Drainage would only partly accomplish the desired result, if a stone were overlooked, as is very possible if encysted or embedded behind the gland. Such cases have occurred. I remember reading of the description of a case in which, after suprapubic cystotomy had been performed, great pain developed, which, with the persistence of unpleasant signs, called for exploration some months later. The trouble was relieved on the removal from the bladder of a phosphatic encrustated gauze sponge, used at time of operation.

Radical operations:

Prostatotomy, urethral and perineal, the former including the Bottini operation.

Prostatectomy, suprapubic and perineal.

(*Bier's operation.*)

Orchidectomy.

Exsection of vas deferens.

Urethral prostatotomy has not proved very successful. It consists in dividing the "bar" of the median lobe per urethram, by a special urethrotome or by the galvanocautery operation devised by Bottini. The operation (by urethrotome) will only be found useful in slight cases of obstruction from enlargement of the median lobe, or more especially where the obstruction is due to a valve-like growth of the median lobe. It is not a simple opera-

tion, and is useful only in a limited number of cases. Of course the fact of it being performed without the aid of sight, and the dangers of a deep hemorrhage, are points against this procedure.

The Bottini Operation.—The treatment of enlarged prostate by the application of the galvanocautery per urethram has recently been improved upon. I am indebted to Dr. Willy Meyer of New York City for the reference used here.

Dr. Meyer very recently read a paper before the New York Academy of Medicine on this subject, and demonstrated the instruments. I understand that he is the only man now possessing them in this country, although Kny, the instrument-maker, is importing some at this very time.

Dr. Meyer's principal reference was to an illustrated article in the *Berliner Klinische Wochenschrift* of April 15, 1897, by A. Freudenberg, on "The Galvanocautery Radical Treatment of Prostatic Hypertrophy after Bottini."

The information which I shall give on this subject is practically a condensed free translation of this article.

Guyon, a French surgeon, in 1888, made the statement that the radical cure of hypertrophied prostate did not exist nor would it exist.

Freudenberg believes that the operations of castration and vasectomy for this condition will soon be forgotten, as has been the once-prized treatment of uterine myomata by oophorectomy. He says: "The little-noted results of Bottini's operation during the last twenty-two years have been really brilliant, and are less dangerous than either castration or vasectomy, more reliable in results, and freer from unpleasant after-effects."

Bottini first thought of this operation in 1874, and performed his first operation in the following year. In 1875 the operation was described in Langenbeck's "Archives," with an account of five cases. Since that time he has been steadily working to perfect the instruments and technic.

The instruments consist in:

1. "A cauterizzatore," shaped like a female catheter.
2. An "incisore," shaped like a lithotrite.

Both these instruments contain a platinum cautery-knife lying in a groove in the beak of the instrument, to be protruded and retracted by a wheel in the handle. To keep the instrument cool there is a current of water which flows through the handle. A scale on the shaft of the instrument registers the extent of the

protrusion of the cautery-knife, and consequently the length, or depth, of the incision.

The first instrument, or the "cauterizzatore prostatico," is really an instrument to burn a channel through the prostate per urethram, and has been but little used in the past few years.

The second is called the "incisore prostatico," and is used to cut into the gland.

Freudenberg always uses the "incisore," and Bottini uses this instrument more and more in preference to the "cauterizzatore."

TECHNIC OF THE OPERATION.

1. "A cystoscopic examination," in order, as Freudenberg says, to possibly locate a stone which might interfere with the after-treatment or results.

2. Cocain anesthesia of the deep urethra, which suffices to make the operation painless.

3. Bladder is emptied before the instrument is introduced, as the action of the cautery is thus intensified.

4. Instrument is tested, introduced, and its beak turned in the direction one wishes to burn; the water-current is then turned on and the beak is pressed against the prostate, and its position verified by rectal touch. The current is then turned on, the rheostat having been set so as to keep the cautery at a red heat It is held for about fifteen seconds so as to become red-hot; the wheel at the

EXPLANATION OF FIGURE.

Pl. Platino-iridium cautery knife.
Gr. Handle.
K. Inlet and outlet for cold-water current.
Sc. Scale.
C. Pole contacts.
CS. Screw to complete circuit.
P. Poles.
L. Cable carrying both wires; also, wheel at base of handle protrudes and retracts knife. Cut represents the Freudenberg modification of the Bottini instrument, the "Incisore."

handle is turned to push the cautery-knife out of the groove, and the beak pressed against the prostate. By listening over the bladder, the author states that we may hear the "sizzling." The current is increased or diminished according as too much or too little resistance is felt. The incision is made in two or three directions; for instance, one in front and one behind the gland, in an antero-posterior direction, and laterally in the direction of the greatest enlargement; between each of the incisions the knife is retracted into its groove. The time required for the operation is given as one and one-half to five minutes.

Very little pain is complained of, and sometimes not as much discomfort as from the preliminary cystoscopic examination, and one patient said that less pain was caused than in the instillation of a silver-nitrate solution. There is some pain at the first urination.

Patients may get up after two or three days, and may sit up to pass water at once. There is no fever, and very little bleeding.

Bottini never had hemorrhage. Kümmel had quite a severe one after using the "cauterizzatore," the result of the patient's pulling out a metallic catheter which was tied in after the operation. It was necessary in this case to do a suprapubic section to check the bleeding, the patient dying in a few days.

Freudenberg himself had one case of hemorrhage from the sloughing off of a piece of the prostate on the third day. He uses the Bottini battery.

The results of the use of the "cauterizzatore" do not commence until the separation of the eschar, which takes place in about thirty days. After the use of the "incisore" the good results commence immediately, and urine is passed naturally, usually in a few hours. After the use of the "cauterizzatore" catheterization may be required. but not after using the "incisore."

The bladder is irrigated and treatment directed to the restoration of tone of the detrusor muscle. Bladder tonicity gradually returns.

Objections were offered to this procedure:

1. As being too dangerous; answered by Bottini's record of only 2 deaths in 80 cases, accounted for by unperfected instruments; *i. e.*, 2½ per cent. of mortality.

2. That the exact state of the prostate could not be determined except by actual inspection of the gland by a finger in the blad-

der; answered by the fact that an expert can determine its size and form by the "Nitze" cystoscope.

3. That severed parts will finally grow together and the difficulty return; answered by the fact that the urinary current keeps the surfaces apart, and also by the result of Bottini's twenty-two years of experince, who never saw a relapse.

Bruce Clark, in 1890, reported one excellent result; some others, not so good, because he did not have a proper current.

Kümmel has had several cases with satisfactory results.

Czerny has operated five or six times with the "incisore," with satisfactory results, and says that the operation demands more attention than it has heretofore obtained.

Bottini, since 1890, has operated upon 57 cases; 43 good results: 32 cured and 11 improved.

Since the improvement in technic and the substitution of the "incisore" for the "cauterizzatore" in the last 23 cases at his clinic, not a single failure occurred.

Freudenberg reports 5 cases, with six operations; one a secondary operation performed after a week.

SUMMARY OF HIS OPERATIONS.

Patients' ages ranged from sixty-three to eighty-one years, and the general condition of nearly all were very bad—much reduced in weight and strength, and showed evidences of septic absorption. Three cases had complete retention. In 2 cases the principal difficulty lay in great frequency of urination; in one of them as often as sixty to seventy times in twenty-four hours. None have had to use the catheter since; the general condition of all improved; they gained in weight all the way from five to fifteen pounds in three or four weeks; the frequency of urination greatly diminished and the residual urine greatly decreased.

In 2, enuresis disappeared.

In 1, it became limited to night.

Freudenberg closes his excellent article with statements such as the following: "These are results which, without exaggeration, are notable, though only 5 cases, and not in themselves sufficient to form a conclusive judgment of the value of the operation.

"That this small number of successes achieves value in that not one failure resulted; that they agree with the brilliant results of Bottini's twenty-two years of experience, and finally that they agree with the favorable judgment of Czerny and Kümmel, working with unperfected and incomplete instruments."

Freudenberg reports his series of 5 cases at this time, when the operations of vasectomy and castration are so much talked of and so often performed.

The rationale of this operation appeals strongly to me, although personally I have never seen it performed. If a surgeon of average ability can get anything like the results that Bottini obtained, and successfully imitated by others, combined with the fact that the operation may be performed without general anesthesia; that it requires only a few minutes to complete, and if it is really so that its effects are so rapid, certain, and lasting, with a mortality rate far below that given for any of the other procedures, it seems to me that more attention should be paid to it. The mere fact that it does not unsex a man, a proposition repulsive to both patient and surgeon, should, and must, give it weight.

It is a matter of surprise to me that so little attention has been paid to it, and feeling its importance I have dwelt thus long upon it.

Perineal Prostatotomy.—This operation could only be useful when combined with subsequent drainage through a tube for weeks. The good results are due to the dilatation from prolonged retention of the tube, and to shrinkage of the prostatic tissues surrounding it. Many cases are undoubtedly greatly relieved temporarily by perineal prostatotomy, and a few permanently. J. Wm. White gives the mortality as 4.5 per cent.

To pass to the still more radical operations we come to the subject of *Prostatectomy*. Our patients are old, suffering from incurable disease, many dying as the result of operation, and it is here that experience, combined with sound judgment, will give the best results.

In 1889 McGill brought forward and put on its present footing the operation of *Suprapubic Prostatectomy*, although it had previously been performed in Germany. After the usual incision, and the character and the exact location of the growth is determined, the most approved plan is to enucleate, as far as possible, with the finger or forceps, through an incision in the mucous membrane. McGill and Buckstone Browne have in this way removed pieces weighing two and four ounces. Where this method fails, and it will be in cases where the prostate contains a large amount of fibrous tissue, the best procedure is to burn a channel by the Pacquelin cautery; hemorrhage can be controlled by very hot irrigation, styptics, the cautery, and compresses.

In some cases, Keyes' method of tamponing the neck of the bladder, or Cabot's modification of the same, will be found useful. I have seen Rand resort to it, carrying the ligature through the urethra and pulling the tampon tightly down into the neck of the bladder. As to the advantages of the suprapubic operation, a much better knowledge of the bladder and its contents may be obtained. The finger may explore and the incandescent light reveal to the operator the presence of calculi, free or encysted, sacculations of the bladder wall, and the state of its mucous membrane.

The removal of the lateral lobes, the control of hemorrhage, and satisfactory drainage are most effectually accomplished. The mortality of both the suprapubic and perineal prostatectomy are given by White as 16.6 per cent.

As to the technic of suprapubic prostatectomy, very few improvements have been made recently. The method suggested by Bristow, of distending the bladder by air, is coming to be quite generally used. Primary drainage after this operation is not difficult to accomplish, and, as a rule, the bladder can be kept empty.

We are indebted to Watson, who, in 1890, presented to the profession his speculum, or retractor, the only objection to it being that it is a wire bivalve and does not keep back the posterior wall of the bladder; in this respect Bruce Clark's trivalve (1891) is to be preferred. Pilcher's incandescent lamp retractor is very valuable, and I have seen it used most advantageously in several cases.

Perineal Prostatectomy.—The usefulness and suitability of this operation will be limited to cases where the hypertrophy is of small size, is limited to the median portion, or is pedunculated and acts as a valve at the neck of the bladder. In these cases successful results have been obtained, when the obstruction can be seized by the finger, forceps, or snare. The cautery may be used to increase the passageway by shrinking up the congested layer. This operation is inapplicable where the prostate is large, and the finger cannot reach the projecting lobe, or in any but shallow perineums.

Watson, in 1888, stated that "any one possessing a forefinger of three inches or more in length could incise and remove, either in part, or wholly, the intravesical growth, through a perineal incision, in two-thirds of the cases of enlarged prostate."

McGill observed, and very truly, that it was poor surgery to

operate in this way, with the prospect of failing in one-third of the cases, and that the performance of this operation should not be limited to gentlemen with preternaturally long fingers.

The "*combined operation*," as it is sometimes called, consists in the performance of both a suprapubic and a perineal section, the growth being forced downward by a finger in the upper wound, to be removed as completely as possible through the perineal opening.

Dr. Belfield very strongly advocated this operation, and very rightly, I think, considered that many cases where the prostatic urethra was distorted by growths that could not be gotten at by a suprapubic incision might be dealt with by this "combined operation."

Belfield gave the mortality of suprapubic prostatectomy as sixteen per cent.; of perineal section, nine per cent.

The addition of the "boutonnière operation" certainly should not greatly increase the mortality.

Treves remarks that "in many reported cases where suprapubic prostatectomy was not entirely successful it was owing to the fact that the prostatic urethra was left still obstructed." It would be in these cases that this operation would relieve a constriction from a suburethral prostatic overgrowth.

McGill, in giving the steps of the suprapubic operation, states that "when the operation is complete, whichever form of growth has been removed, it is advisable to see that the urethra is patent and to pass the forefinger as far as the first joint into the canal."

Bier's operation consists in the ligation of both internal iliac arteries, to cause atrophy of the gland by influencing its nutrition.

Meyer seemed to think favorably of this operation, and considered it especially applicable to younger cases, who had not reached the end of their sexual life, and were not willing to submit to an emasculating operation. He himself, however, could not show what might be called "gratifying" results from this procedure. It is dangerous and liable to cause serious complications.

Castration.—We now come to a procedure which has attracted the attention of the profession recently for the relief of this condition. The relation of the prostate to the testes has long been known, and it has, so far as we know, no use in the economy except as an accessory sexual organ. It is undoubtedly true, and

the fact has been confirmed by innumerable experiments and clinical observations, that the prostate does shrink after castration. The prostate of eunuchs and gelded animals is always small, and in the former no larger than children's. White compares, and very justly, the atrophy of prostatic fibro-adenomata, resulting from castration, to the changes occurring in the uterus and uterofibromata after oophorectomy.

Frederick Ramm of Christiania was undoubtedly the first to perform castration for the relief of hypertrophied prostate, and published an account of 409 cases of castration and vasectomy.

White of Philadelphia, in the *Annals of Surgery*, for July, 1895, brought before the profession probably the most complete and scientific demonstration of the effects of castration, and at that time published a table of 111 cases, collected from various sources. The death-rate, including apparently hopeless cases at the time of operation, was 18 per cent.; excluding these, we might bring it down to about 7 per cent. Further, White proved that even in the desperate cases 75 per cent. showed evidence of shrinkage before death. Certainly statistics like these compare favorably with any of the forms of operative treatment, and taking into consideration the age of the patients the death-rate is not high. The operation is comparatively simple, and avoids a drainage wound.

In 1896, and the article was published in the *Annals of Surgery* for June of the same year, Dr. L. S. Pilcher reported six cases, in all of which there were very gratifying results, although some of the cases were extreme. He noticed, as have others, that there was more or less return of bladder tonicity.

It is wonderful how soon the signs of improvement appear in these cases after operation. It commences in three or four days, probably from a diminution of congestion, actual atrophy, or contraction persisting for a long period of time.

As to the occurrence of mental derangement after castration, there seems to be no good reason to prove that it is a sequel peculiar to this operation. It is probably a traumatic delirium, which is more liable to occur in patients of advanced age, and in some instances may be due to the anesthetic.

It is difficult to be convinced that the mental state referred to is possibly due to the removal of a gland-production intended to be taken up by the blood, and exerting its influence in this way: as in entire oblation of the thyroid does myxedema occur. This mental state has occurred where only one testis has been re-

moved; and, again, in young men, where it has been found necessary to remove both testes there have been no unpleasant mental symptoms noticed.

However, that these mental derangements do occur, we know, and it is possible that they occur more frequently after this operation. That this possible sequel should argue against castration should not be considered in the face of the undoubted relief given to most trying symptoms. Many cases, too, could be accounted for by the septic irritation and absorption from the severed cords.

Why any old man, whose period of sexual activity is over, in the presence of the fearful discomfort and danger due to an enlarged prostate, should hesitate to part with his testicles for sentimental reasons, is beyond my comprehension; however, it is usually the case.

Vasectomy.—The comparative value of "exsection of the vas," or its ligation, is still somewhat sub judice. That it causes some diminution in the size of the testicles, and a marked atrophy of the prostate, is undoubted, operations on animals and clinical observations proving this fact. One advantage is that it may be performed without general anesthesia, and also that it caters to the esthetic instincts of some patients. The presence of the testicles, though useless, reminding them, as a French surgeon once remarked, of a "*virilite passée.*"

In the preparation of this paper I have corresponded with several prominent men, with regard to their personal experience with vasectomy and castration. I have tabulated these statistics where possible, and shall quote from letters in some cases.

1. Nicholas Senn of Chicago, states: "I never did, and probably never will, unsex a man in the treatment of enlarged prostate."

2. Arpad G. Gerster of New York City, says: "I feel that the indications enabling the surgeon to make an intelligent selection of cases to be subjected to operation are not sufficiently clear, and that the class promising success is not yet separated from the one in which the operation is useless. We ought to be able to base such a distinction on a scientific foundation; the factors of this or that indication ought to be known and made accessible to easy demonstration. Present practice seems to be very empirical."

Castration, 4 cases; 3 much benefited, 1 died of emphysematous phlegmon.

Vasectomy, 1 case, without any benefit.

3. W. W. Keen of Philadelphia:
   Castration, 2 cases, results fairly satisfactory.
   Vasectomy, 0 cases.
4. W. T. Bull, New York:
   Vasectomy, 2 cases; too recent to state results.
5. John Homans, Boston:
   Castration, 1 case; results satisfactory after some years.
   Vasectomy, 0 cases.
6. Willy Meyer:
   Castration, 1 case; satisfactory result.
   Vasectomy, 2 cases; first case with no apparent result, second case not of value for statistical purposes.
7. Frank Hartley:
   Castration, 3 cases. No definite statement as to results.
   Vasectomy, 2 cases. Merely "not very satisfactory."

8. M. K. Richardson, Boston: "As to the statistics in regard to the comparative value of castration and vasectomy for hypertrophied prostate, I would say that I have had practically no experience with either of these operations. I have castrated but once for hypertrophied prostate. I thought for a while that it did some good, but I knew afterward that it did no good, for I found that the trouble was due to a stone sacculated in the superior wall of tne bladder—a stone which I could detect neither with the sound nor by digital exploration after perineal section. Suprapubic cystotomy would probably have cured the man, if I had not been fooling around with sounds, castrations, and perineal sections. I may add that I had the best men here in consultation, and none of us were ever able to feel anything."

9. John B. Deaver, Philadelphia:
   Castration, 2 cases; negative result.
   Vasectomy, 1 case; negative result.

He says: "If I may be forgiven, I do not believe I will ever do the latter (castration) again."

10. L. A. Stimson, New York City:
    Castration, 2 cases; benefit in one.
    Vasectomy, 2 cases; no benefit.

11. Hunter McGuire, Richmond, Va.: "I am sorry I cannot give you any information about the comparative value of castration and vasection in hypertrophied prostate. I have never performed either of the operations for that purpose and have never regarded them as justifiable. I have in my hospital now a gentleman from Mississippi who was castrated for hypertrophied

prostate eight or ten months ago. I removed a stone from his bladder, which was the chief cause of his trouble, and have made for him a suprapubic artificial urethra, with which he gets on with great comfort."

12. William S. Halstead, Baltimore, Md.: "Our experience with vasectomy for hypertrophic prostate gland has been very limited; in fact, we have had no case of vasectomy proper, for whenever I have divided the vas deferens I have also divided the veins and the arteries of the cord. Our clinical experience corresponds with the experimental results of Griffiths."

13. Orville Horwitz, Philadelphia, Pa.: "I have performed the operation of double castration, for the relief of hypertrophy of the prostatic gland, in 23 cases, and divided the vas deferens, for the relief of the same condition, in 8.

"All of the cases have recovered from the operation. The relief given from the double castration appeared in from three days to three weeks, the gland being very much smaller by the tenth day after the operation. In 4 of the cases stone was detected ten days after the castration, which was successfully operated upon on the fourteenth day after the first operation.

"In 15 of the cases the results of the operation have been all that could have been desired, the improvement beginning, as a rule, as early as the third or fourth day. At the present time are not employing a catheter, cystitis has disappeared, general health excellent.

"In 6 cases: General health much improved; tonicity of the bladder not restored; employ a catheter several times a day; no trouble in the introduction of the instrument; no attacks of retention of urine since the operation; prostate gland has undergone atrophy; still slight cystitis.

"In two cases—very old patients, with damaged kidneys: Improvement in general health; still employs the catheter; still considerable cystitis; prostate undergone atrophy; no difficulty in inserting the instrument; bladder, in each instance, much contracted.

"In those cases in which vasectomy was performed, the results were by no means as satisfactory as in those in which castration was done for a similar condition.

"The longest time that elapsed before any improvement was observed was six months; the shortest was one. Only to-day I received a letter from a physician about a case in whom a vasec-

tomy had been performed six months ago, in whom there had been no improvement.

"My experience leads me to believe that double castration is by far the better operation.

"If the patient desires, a pair of celluloid spheres may be put in the empty scrotum, after the operation, and when the patient recovers no one could tell, except by very close inspection, that the testicles had been removed. In order to make the grafting of the spheres a success it is necessary to remove the tunica vaginalis testis with the testicle."

I was somewhat surprised at the result of my correspondence, as tabulated above. It was rather remarkable, to my mind, how little experience any one operator had had with the operations of castration and vasectomy. There seemed to be practically no enthusiasm. The results from castration had been only fairly good, but uncertain and unsatisfactory as to the value of vasectomy.

SUMMARY.

12 operators heard from.

39 cases of castration; only 23 satisfactory.

16 cases of vasectomy; only 1 perfectly satisfactory; others only fairly so, totally without benefit, or too recent to be of value for statistics.

There are several points to be taken into consideration when deciding on a radical prostatic operation.

1. The patient's age (usually over fifty-five years, rarely over seventy) increasing the mortality both as regards the operative procedure and the administration of an anesthetic.

2. As a rule these cases do not come to operation until late in the course of the disease, when the health is broken down from the attendant pain and septic poisoning.

3. The occurrence of chronic renal, circulatory, and pulmonary changes at this time of life renders an operation dangerous.

When shall we operate, and which procedure shall we select? These questions can only be satisfactorily answered by reference to the experience of many operators, and for this reason I have reviewed the subject, claiming nothing original, and feeling that by introducing the subject I, at least, would surely learn from hearing the experience of the members of this society in a discussion, which I hope to incite.

DISCUSSION.

Dr. W. C. Wood said this subject is too large to be discussed fully in any one evening, and that the last word is far from being

said on the treatment of enlarged prostate. Given an ordinary case and we are all agreed that all operation is out of the question, provided the catheter life is successful. But we find cases of enlarged prostate where the catheter cannot be used. He had had under his care for six months a gentleman with a very large prostate. His urine showed no cystitis. He had not been able to pass a catheter into the bladder. This week he performed the operation of castration on this man, and he is now able to hold the urine double the time that he could before. Then there is that other class of cases of enlarged prostate where the catheter is successful, with the exception of a few exacerbations. He had a patient whom he had taken care of for five years in catheter life, and each exacerbation in his case has been relieved by a few irrigations of nitrate of silver. That man is perfectly satisfied with his condition and will consider no operation.

Then we come to that other type, where the cystitis is severe, where we operate primarily for the cystitis, and secondarily for the prostatic condition. A severe cystitis requires drainage, and he believed that the advantage of prostatectomies is largely due to the fact that they produce proper drainage. The mortality for prostatectomies, it seemed to him, is too low. The combined prostatectomy, as recently described by Alexander, shows a high mortality. A prostatectomy, through the suprapubic route, if it is a radical operation, is successful, except that too often the patients die, as has been stated by Fuller. He had under his care a man who had had that operation performed several months ago. He had his finger in the patient's bladder on the day before, through an opening suprapubically, to remove a large amount of calcareous material. He is dying of cystitis. The operation was in every way a failure, as regards improvement of symptoms.

The speaker saw Dr. Meyer's instrument some time ago—the incisor instrument—and saw the demonstration of it. When we think of an operation which had been successful for twenty years for a distressing condition that is common to one man in ten, we should expect a wide sphere of usefulness for it. And one cannot realize why, with such a slight mortality, a man operating anywhere in Europe for twenty years, would not popularize such an operation. The dangers are that it is done in the dark, and is liable to create hemorrhage. But it is a simple operation when we can see what we are doing, and if the operation is to become popular he thinks it will be done first by sight.

The question of castration is unfortunately a mixed one. As

near as we can find out in properly selected cases, the percentage of improvement runs about eighty, while the percentage of improvement by advocates of the section of the vas deferens is never placed over 50. Personally, the speaker had had four cases of castration. One was in extremis; a second was a case of castration, with a perineal section, and he removed two stones from the bladder. He had kept track of this case for two years, and now he has an ounce of residual urine. He is perfectly satisfied with the result in this case. Another case had had a perineal section performed and he never got his power in the bladder during three months until castration was done, and within three weeks after the castration he had sufficient muscular power to empty the bladder over a contracting prostate. The fourth case is now very recent, and was done under peculiar circumstances, without cystitis.

The speaker said that we are very much indebted to Dr. Wallace for the complete statement he has brought before us. He would classify castration and section of the vasa as palliative rather than radical operations.

Dr. A. T. Bristow said that if we were restricted to the operations previous to that of orchidectomy there would be a great deal of weight in Dr. Wood's statement that these cases may be divided into two classes: those in which catheterization was easy and comfortable, and not attended with cystitis, and those in which there was a cystitis present and the difficulties of catheterization increasing. If, however, we look at the matter in the light of the operation of Bottini, and accept the statistics as given in the paper of the evening, that distinction must fall to the ground.

The introduction of an instrument into the bladder is always a misfortune. The daily introduction of a catheter is, under the most favorable circumstances, a nuisance and a menace. If, then, this operation can do what its author claims for it, with a mortality of but two per cent., it relieves the patient of this necessity—the daily use of a catheter—with safety. He should decide in favor of Bottini's operation rather than endure the inconvenience of daily catheterization the rest of his days. Now it seems if he, as a surgeon, familiar with the technic of catheterization, feels thus (and he is rather of the opinion that most of his colleagues would be of the same opinion, provided these statements of Bottini are correct), we should not draw this distinction with regard to operative measures, as desirable only in cases in which cystitis existed, together with difficult catheterization. We never can train peo-

ple to be as careful of the catheter as they ought to be, and however careful we are the sterilization of the urethra can never be complete. It has always been a matter of surprise to him that authors have advised that the urethra should be irrigated with 1-10,000 solution of bichlorid, because it must be perfectly evident that such irrigation can have but a very superficial effect, and that the organisms that reside within the crypts are by no means touched by such washings, which is irritating rather than protective. Moreover, it is impracticable for patients to carry out the elaborate procedures laid down by many authors. Most prostatics require catheterization three or four times a day. Thus, the chance that these patients will escape an ultimate cystitis is small. If, then, we can secure results, as stated, with so little risk, this operation must put the whole surgery of the prostate on an entirely new basis, and the speaker questions whether we are not justified in urging it whenever the use of the catheter becomes a necessity, as less risky than an indefinite period of catheter life.

The operations for prostatectomy can now hardly be called justifiable, with their high mortality. If it be true that the chances of vasectomy are but one in two of success, and the chances of orchidectomy eight in ten, then the latter operation is the only one which we can compare with that of Bottini.

Dr. Bristow said that he must confess that he had had a great deal of the feeling which has been expressed by two of the letters which had been read, with regard to the operation of castration. It is an operation which must ever be repulsive to the surgeon, nor will patients accept it until reduced to despair. The operation is not altogether the trivial operation that has often been described. Even in the most careful hands it is followed by fatal results. He, personally, had done four orchidectomies. He lost the last case in the following manner: The patient was an old gentleman of seventy-three, with a prostate only moderately enlarged, but with an extraordinarily irritable bladder. The operator was unable to find a stone. For four or five days after the castration he could see no change in the symptoms, but after that they began to be modified. No disturbance from the operation occurred and the patient left the hospital with the wound closed per primam. Suppuration subsequently developed about one of the ligatures, very moderate in amount, but the patient developed septic pneumonia and died. The other three cases were more fortunate and improvement was immediate.

Dr. H. H. Morton said that, of course, the only procedure to be

thought of in a case of enlarged prostate is systematic catheterization, so long as that is practicable, and operative procedures, as they stand to-day, are not to be thought of. But, as Dr. Wallace has already mentioned, the indication for operative measures in a prostatic is approaching breakdown in catheter life, and the patients who are in this condition certainly demand operative interference, as the outlook is otherwise hopeless.

The operation of castration was so warmly received by the profession because it offered a reasonable chance of success in the saving the lives of these patients and at the same time was accompanied by a minimum of danger.

His own experience was limited, having had but two cases, and both in extremis. In both there was a slight improvement after the operation; one patient lived three or four weeks afterward, and the other died in ten days, but in both cases he did not think the end was hastened by castration.

In reading the article of Freudenberg he was struck by the fact that some of the cases operated upon were extremely bad cases, the urine was heavily loaded with pus, and one patient was delirious, while the other case was almost as bad. Both patients were in a critical condition and would have died, apparently, in a very short time. As a result of the operation done by means of Bottini's instrument, both cases rapidly improved; they gained weight, and in the course of a few weeks were up and about. He thought that cauterization by Bottini's method is an operation that merits careful investigation, and which ought to be tried fully and completely, in the hope that it will fill all the claims of Bottini and Freudenberg.

If this proves to be the fact, cases of prostatic hypertrophy, accompanied by difficult catheterization, cystitis, etc., instead of being subjected to the dangerous operations, which are so uncertain in their results, which are in use to-day, will be as amenable to treatment and will be as successfully treated by the surgeon, in the future, as are stricture and stone in the bladder in younger men.

Dr. F. W. Wunderlich said that he would supplement what the reader of the paper had said in regard to Dr. Freudenberg's experience with Bottini's operation, by giving the history of a case, which appeared in No. 46 of the *Berliner klinische Wochenschrift.* Dr. Freudenberg reported the case at the meeting of the Berliner Medicinische Gesellschaft, October 20, 1897: O, aged sixty-three, had been referred to him in July, 1893, on account of hyper-

trophy of the prostate, complicated by an aggravated form of cystitis. He had been afflicted with bladder trouble for several years, and the residual urine amounted to from 700 to 1000 cubic centimeters. Under the treatment, consisting of irrigations of the bladder with solutions of boric acid and of nitrate of silver, also regular evacuations of the bladder with a catheter, the cystitis improved; but the quantity of residual urine increased. In the beginning of 1894 the patient could not pass any urine without the aid of a catheter. He could not reconcile himself to the idea that he should be obliged to use the catheter for the remainder of his life, and applied to Dr. Casper for operative treatment. July 5, 1894, bilateral orchidectomy was done by Dr. Casper. The operation did not improve the condition of the patient. He was still unable to pass a drop of urine without the aid of a catheter, and he had to use it with increasing frequency. A moderate degree of cystitis persisted, notwithstanding irrigation of the bladder was regularly practised.

April 27, 1897, nearly three years after orchidectomy had been performed, Freudenberg operated with Bottini's incisor, in the presence of Dr. Casper and several other physicians. He made three incisions: one posteriorly, 3 centimeters in length; the second to the left side, 3 centimeters in length, and the third anteriorly, 2 centimeters in length.

Fifty-one and one-half hours after the operation the patient passed 6 cubic centimeters of urine spontaneously, which was slightly tinged with red; during the night he passed at three different times from 1 to 7 cubic centimeters. On the second day after the operation he passed as much as 55 cubic centimeters, and on the third day as much as 132 cubic centimeters at one time. May 7th, ten days after the operation, the residual urine amounted to 55 cubic centimeters. On the second day after the operation the catheter and irrigation of the bladder had to be used twice only. From May 15th, the eighteenth day after operation, it was used once a day, and since May 31st, thirty-four days after operation, the catheter has not been used at all. Toward the last, the residual urine ranged from 11 to 40 cubic centimeters in the morning, and from 15 to 52 cubic centimeters in the evening. On the fifth day the temperature rose to 38.0° C.; at other times it did not rise above 37.5° C.

At the time of the report the patient passed urine six or seven —at the utmost eight—times in twenty-four hours; once during the night, about 4 A.M. He passed urine in a good stream, and

without the least difficulty. Although the patient has not restricted his diet, the urine has become clear, and for five months he has not needed a catheter. In this case the restoration of the functions of the bladder is entirely due to the operation, and no aid has been derived from strychnia, electricity, or cool douches. For a short time he took salol and urotropin. Persistent constipation, to which the patient had been subject prior to the operation, has been cured, and his bowels move regularly. Freudenberg has observed the same effect on the bowels of several other patients on whom the Bottini operation had been done. Bottini has also operated successfully with his incisor on a patient who had been treated previously by resection of the vasa deferentia without deriving any benefit.

Freudenberg has made some alterations in the instrument, which Bottini recognized as improvements at the Medical Congress at Moscow. He increased the size of the handle, so that the instrument can be held more securely. The current of water enters the instrument at the distal end of the handle; this gives the advantage that the handle is kept cool, as well as other parts of the instrument; the rubber tubes for the water are out of the way, and do not interfere with the manipulations of the instrument. The beak and the knife are shorter; the latter is made of platino-iridium, which is harder than platinum, is not so liable to be bent, and having a higher electrical resistance, is heated by a smaller current of electricity. The opening in the female blade is larger, consequently there is less danger of the knife being deflected when it is pushed home. The current is carried to the knife by an insulated wire of about twice the thickness of the conducting wires in Bottini's instrument, and passes back through the male shaft; in fact, owing to the close contact of the different parts, through the entire metal of the instrument. In consequence of this arrangement, the knife can be fastened firmly to the rigid male shaft, and is held more securely in position. The principal and most important advantage is that this instrument can be placed in antiseptic solutions, and can be sterilized in boiling water.

Dr. Wallace said, as to the suprapubic operation, he believed it is an operation that we can never dispense with, for the simple reason that so many of these cases are associated with stone. We must have the suprapubic operation to deal with these cases. It simply emphasizes the necessity for a most careful preliminary examination by sounding, by rectal touch, and by cystoscopy.

The plan of combining a suprapubic incision and the Bottini operation has also occurred to the author.

He was not present at Dr. Meyer's demonstration before the New York Academy of Medicine of the Bottini instruments. It remains to be seen, then, whether the surgeons of New York City will take hold of this operation with more enthusiasm than it seemed to a previous speaker they would from its reception at that time. Dr. Meyer is the only man in this country, so far as the speaker knew, who possessed the instruments, but it is to be hoped that others will obtain them and give the operation a fair trial. He understands that the complete outfit costs about $100 —incisor and battery.

BROOKLYN SOCIETY FOR NEUROLOGY.

Regular meeting, Held January 27, 1898.

Dr. A. C. Burke, President, in the Chair.

Dr. Haynes presented a child aged seventeen months, weighing thirty-six pounds, with a good family history, fine healthy appearance, and very well developed; hair well grown, twelve teeth, tongue not enlarged, abdomen not protuberant, but flesh, though not fitting, too firm for fat; skin, harsh, dry, and cool, which might be due to exposure; can sit but not creep or stand; moves all its limbs aimlessly; will not hold things in its hand; rolls head, and has dull expression about eyes; does not talk and takes little notice; thyroid gland not palpable, and otherwise functions performed normally. Thyroid extract tried for a few days experimentally, made marked improvement. Remarked on the differential diagnosis between myxedema and adiposis universalis, and asked for an expression of opinion in this case. Drs. Combes, Cardwell, and Brush inclined to the opinion that it was a case of adiposis universalis, but Dr. Onuf thought it was a case of modified myxedema lately described by Bourneville.

Dr. Cardwell showed a boy, aged sixteen, who for the past six years has developed all the classical symptoms of Friedricks' ataxia, beginning in the upper extremity and now involving the lower extremity, trunk, neck, and cheek but not the eye-muscles, with the loss of reflexes. The diagnosis was concurred in by all the members present.

The president then read a paper on "Puerperal Myelitis" describing five cases which he had lately seen in the Kings County Hospital presenting, besides the paraplegia, atrophy, and contractions, involvement of the sphincters and girdle sensation with some febrile movement.

Dr. Haynes described a case which he saw some years ago of a like character and was inclined to regard most of these cases as forms of "peripheral neuritis" due to traumatism, septic poisoning, or narcosis. The other members present agreed with the reader of the paper. W. H. Haynes, Secretary.

THE BROOKLYN MEDICAL JOURNAL.

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EDITORIAL.

THE LIBRARY.

That which directly affects our interests and our fortunes for good ought to invite our support, and it generally does. All that is necessary, as a rule, to insure the success of an undertaking is the demonstration that it is one of real personal interest. The demonstration may not be a matter of ease, but let it once be made, let it be brought clearly before the mind that upon the accomplishment of a certain object advantages will surely accrue to the person, family, community at large, the completion of that project may be assured. At the present time the Medical Society of the County of Kings has a project on hand, a project that comes near to the heart of every person in this city. They are attempting to provide means for the advancement of medical knowledge, for the advancement of that knowledge which is brought to bear in protecting the dearest of human possessions, human health and life. Ought not that to appeal to the individual? Ought not that to appeal to every father, mother, son, and daughter among us? Is there anything which will stir a household more deeply than the announcement that these possessions are in danger. Is there any sacrifice too great to protect them? There is but one answer to such questions. That answer comes spontaneously.

The project we refer to is the erection of a library building, the erection of a building to which the physician may go and seek aid in the solution of difficult problems, the difficult problems which arise in the preservation of life. Without the library the work is handicapped. Without such a means at hand valuable time will be lost in seeking it at a distance.

Now, what is the drawback to the immediate completion of this project? Lack of funds. We think we hear the exclamation on all hands: What! will an intelligent community allow such a work to falter, will it allow a work to delay which has as its object, it may be, the saving of our own father, mother, wife, or child? Can it be possible that our citizens will not immediately take the matter in hand and bring it to completion? Do they not perceive that the object is a paramount one? We answer: They would act could the importance of it be demonstrated to them. We answer, moreover, that the accomplishment of the object would stand an eternal monument to the completers. We have faith that the funds will be forthcoming. That faith has been strengthened in the last few weeks by substantial evidence. We record with pleasure, with thanks, the gift of $2000 by Mrs. J. L. Zabriskie toward this offering to the common weal. She knew the importance of the work. She knew the disadvantage the profession of this city experiences in the lack of this projected treasure-house. She knows what a profit it will be to the people at large. And she, the helpmate of the good doctor, has had the demonstration of the necessities of the profession at large brought clearly before her mind. We bless her for her goodness. We thank her for her good example. She has erected by her gift a living monument to her husband. She has done her part toward providing for the medical profession what her husband was the happy possessor of—a well-stocked library.

LEGISLATION FOR WOULD-BE BENEDICTS.

The tendency of the present day to remedy all forms of evil —moral, social, or political—by legislation is well illustrated by a bill recently introduced by one of Ohio's representatives in the legislature of that State. This bill provides for a physical examination of all matrimonial candidates, who must be pronounced "physically perfect" by a board of medical examiners before they can be "passed;" *i.e.*, before they will be permitted by the State to

enjoy connubial bliss. The object of this law is stated by its author to protect society and benefit the race. Ohio has in its institutions 1100 imbeciles, the majority of whom came into the world, presumably, as the result of unwise marriages. Not a few are the direct result of persons of low intelligence marrying. "It is a well-known fact," the representative before mentioned says, "that like begets like, drunkards beget drunkards, and imbecile fathers have imbecile sons." The existence of degenerates and professional criminals depends upon the marriage of persons who would not be permitted to contract such a sacred relation if there were a law prohibiting it.

Several of the prominent physicians of the State have given the bill their hearty support, among the number being the Secretary of the State Board of Health. Others regard the measure as absurd and impracticable. If the bill becomes a law its working will be noted with great interest. Just how the legislature of Ohio will control the union of incompetents, when a few dollars will carry them out of the State to get married and bring them back after the ceremony is performed, we are not informed, but undoubtedly the originator of the proposed reform has considered this and the many other difficulties which suggest themselves, and has devised a way to overcome them.

THE REGULATION OF SEX.

The announcement that Professor Schenck of Vienna had practically solved the problem of regulating the sex in procreation was received by the laity and press, as a fact beyond dispute, and as a result the professor's reception-room has been thronged with fathers and mothers of would-be boys, until he has had to leave town to escape their importunities. It has been stated that he based his discovery upon the different number of red blood-corpuscles in the two sexes, and that by putting the mother on a suitable diet he could direct the development of the embryo in this respect. Just how the professor would answer Virchow's question as to what kind of a diet a mother must have to give birth to twins, we do not know. The discovery, and all that pertains thereto, has been said to be contained in a sealed paper which has been submitted to the Vienna Imperial Academy of Science. This has been denied on the authority of Professor Schenck; indeed, from the latest information we have been able

to obtain, there seems to have been a permature discharge of a gun which was not fully loaded, as was the case with Koch's tuberculin, and the result will, we apprehend, be much the same, namely: much noise, and injury done by the recoil to the one who held the gun. The letter from Victor Neesen, M.D., a graduate of Long Island College Hospital, and now connected with the sanitarium of his uncle, Professor Martin, in Berlin, which is published in this issue of the JOURNAL, will be read with interest in connection with Professor Schenck's reported discovery, and also in connection with Dr. Schlatter's now celebrated case.

PROCEEDINGS OF SOCIETIES.

BROOKLYN SOCIETY FOR NEUROLOGY.

Regular Meeting, Held February 24, 1898.

DR. A. C. BRUSH, President, in the Chair.

Dr. Cardwell showed a girl, aged twelve years, who, four weeks after birth, had an abscess on the right side of the lower jaw which was lanced and after healing it was noticed that the right side of her face became suffused with a bright red flush while masticating anything sweet or sour. It was noticed that she had partial right-sided paralysis of the lower facial muscles with frequent twitching of the same side of the face. Some of the members thought there was also hemifacial hypertrophy of that side.

Dr. Haynes presented a little girl, aged three years, in whom it was noticed since it began to eat, about its eighth month, that the right side of the face became uniformly swollen and flushed. The child has a marked neuropathic ancestry, is rachitic, and has noticeable hemifacial hypertrophy of that side. There are no disturbances of sensation in either case and both are otherwise well.

The explanation of these cases that was practically agreed to was, that they were due to a marked neuropathic predisposition, congenital or acquired, together with enlargement of the tissues and blood-vessels, paresis of the vasoconstrictors and reflex excitation from the substances inthe mouth.

Dr. B. Onuf, on invitation, then read a paper on angioneurotic edema and allied conditions, relating the histories of seven cases, all of them giving a marked neuropathic family history, and gastro-intestinal disturbances; the edematous swelling occurring chiefly on the head and extremities, accompanied by

urticaria and erythema, worse in the morning, and relieved by internal medication. He commented in detail on the etiology, pathology, diagnosis, and neurology of this condition.

Dr. Haynes thought the condition of these cases was due to a probably inherited predisposition to the so-called uric-acid diathesis, and excited by auto-infection due to the disturbances of the gastro-intestinal tract.

Dr. Elliott thought it due to local irritation and disturbed nutrition from altered condition of the blood-vessels or nerve-supply.

Dr. Combes suggested alcohol as an exciting as well as predisposing cause.

Dr. Lloyd reported an analogous case of a young boy who ate some stale oysters and besides constitutional symptoms developed a well-marked erythema over the whole chest.

Dr. Onuf, accepting the above suggestions, closed the discussion. W. H. Haynes, Secretary.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

697th Regular Meeting, Tuesday, February 15, 1898.

The President, Dr. Joseph H. Hunt, in the Chair.

There were about 100 members present.

The minutes of the January meeting were read and approved.

REPORT OF COUNCIL.

The Council reported favorably upon the following:

Robert S. Bell, L. I. C. H., 1887.

James M. Downey, L. I. C. H., 1891.

D. A. Harrison, N. Y. Univ., 1882.

H. C. Keenan, Coll. P. & S., 1895.

Robt. Franklin Ives, Coll. P. & S., 1895.

APPLICATIONS FOR MEMBERSHIP.

Fred. J. Kamper, 428 Evergreen avenue, N. Y. Univ., 1875.

Edward H. Pollock, Jr., 541 Putnam avenue, N. Y. Univ., 1897.

J. V. Lauderdale, Eighty-fourth street, between Second and Third avenues, Univ. of N. Y., 1862. Proposed by Membership Committee.

Willard G. Reynolds, 107 Gates avenue, Bellv. Med. Col., N. Y., 1894. Proposed by H. P. de Forest and J. P. Warbasse.

S. E. Moore, Hamburgh avenue and Stanhope street, Univ.

of Buffalo, 1895. Proposed by J. M. Winfield and George McNaughton.

Prosper Hector de Gregori, 335 Lorimer street, L. I. C. H., 1896. Proposed by H. H. Morton and D. Myerle.

The President announced that the following had completed their membership since the last meeting:

Frank K. Fitzgerald.
F. H. Birmingham.
William H. Hubbard.
George F. Little.
Edward F. Hoffman.

The following, having been regularly proposed and favorably acted upon by the Council, were declared by the President elected to membership:

Warren Schoonover, Jr.
F. C. Skinner.
Edward E. Hicks.
James H. Anshew.
Henry Hawxhurst.
Caroline H. LeFevre.

SCIENTIFIC BUSINESS.

"Stone in the Bladder in Young Children" (with patient and specimen). By A. T. Bristow.

Discussion by Walter C. Wood, J. D. Sullivan, G. A. Evans.

"Report of a Case of Acute Hepatitis." By Jacob Fuhs.

Discussion by H. P. de Forest, J. A. McCorkle, H. B. Delatour, E. Reynolds, A. T. Bristow, J. C. Cardwell, and J. D. Sullivan.

NEW BUSINESS.

Standing Committees.

The President appointed the following members of Standing Committees for the ensuing year:

COMMITTEE ON MEMBERSHIP.

William Nathan Belcher.
James W. Fleming.
George E. West.

COMMITTEE ON DIRECTORY FOR NURSES.

Henry A. Fairbairn.
Calvin F. Barber.
Joshua M. Van Cott.

COMMITTEE ON ENTERTAINMENT.

J. E. Sheppard.

James P. Warbasse.
Frank Baldwin.

HISTORICAL COMMITTEE.

Homer L. Bartlett.
Wm. Schroeder.
Wm. Browning.

COMMITTEE ON LEGISLATION.

James M. Winfield.
David Myerle.
Wm. W. Browning.

COMMITTEE ON PUBLIC HEALTH.

Z. Taylor Emery.
Henry R. Price.
Elias H. Bartley.
Ezra Wilson.
Francis Peele.

DELEGATES TO COUNTY MEDICAL SOCIETIES.

To New York County: Charles Jewett.
To Queens County: George McNaughton.
To Richmond County: J. E. Sheppard.
To Westchester County: Charles N. Cox.

The President announced that at the request of the Ladies' Auxiliary of the Building Committee, he had appointed the following Advisory Committee.

J. H. Hunt (*ex-officio*).
Geo. McNaughton.
Charles Jewett.
C. N. Hoagland.
George Fowler.
Frank E. West.
William Maddren.
H. L. Bartlett.
Alexander Hutchins.

The President announced the death of Arnold Stub, on February 5th, and Samuel J. Osborne, President of this Society in 1851, who died at Oshkosh, Wis., on January 1st.

The President called attention to the announcement on the meeting notice in regard to the "Collective Investigation of Infantile Scurvy in North America," by the American Pediatric Society; blanks for report of cases, and all further information to be had by addressing Dr. A. Caille, 753 Madison avenue, New York City.

JOHN SULLIVAN THORNE, M.A., M.D.,

PRESIDENT MEDICAL SOCIETY, COUNTY OF KINGS, 1846.

A communication was received from the Pure Food and Drug Congress, to be held at Washington, March 2d, calling attention to the importance of this congress and requesting this Society to send three delegates.

The President stated he would be glad to furnish credentials to any gentleman who would attend this congress and represent the Society.

There being no further business, on motion, adjourned.

David Myerle,
Secretary.

HISTORICAL DEPARTMENT.

JOHN SULLIVAN THORNE, M.A., M.D.

The presentation of a few thoughts to the medical profession, relating to one who was honored and respected by all who had the pleasure of his acquaintance, should inspire us at this time with feelings of admiration, that we, as a profession, had men among us, who, in the early history of the City of Brooklyn, assisted in making a city such as we look upon to-day. The effort of his life seems to have been in the direction of education. Dr. Thorne was born in the City of New York, April 19, 1807, and died in Brooklyn, N. Y., September 1, 1880. He was attended in his last illness by the late Andrew Otterson, M.D. His early education was received in the schools of New York. He entered Union College and received the degree of A.M. in 1826, and immediately began the study of medicine in the office of Drs. William Wendell and Charles Ball, who will be recognized as two of the organizers and ex-Presidents of the Medical Society, County of Kings; matriculating with the College of Physicians and Surgeons, N. Y., he graduated an M.D. in the class of 1829 and immediately began the practice of medicine in Brooklyn, N. Y., at 51 Sands street. His father, R. V. W. Thorne, M.D., was born on Long Island in 1777, and died in 1871. His mother, Maria Jones Sullivan was born in New York in 1783, died in 1850. Dr. J. S. Thorne united himself in marriage with Miss Deborah Rhinelander Underhill of New York on December 3, 1840; she was born in 1812, and died in 1892. The following named children graced the union:

Elizabeth Mary Thorne.
Louise Rhinelander Thorne.
Jane Theresa Sullivan Thorne.

Julius Stuart Thorne.

Maria Jones Sullivan Thorne.

Returning again to his professional work we find that on February 8, 1830, he assisted in organizing the first dispensary in Brooklyn, holding the position of Attending Physician until 1833. When the dispensary was discontinued in 1839 he assisted in organizing the City Hospital, now known as the Brooklyn Hospital, and was one of the attending physicians until 1855. During the years 1844–45 he was President of the Hospital; in 1832, he was Physician to the Cholera Hospital, and from 1840 to 1880, Physician to the Roman Catholic Orphan Asylum. In 1876, he became a member of the Council of the Long Island College Hospital, and at the same time one of the Consulting Surgeons; in 1879, a member of the Board of Regents. These positions he held until the time of his death in 1880.

His connection with the Medical Society, County of Kings, dates from 1834. One of his preceptors, namely, Charles Ball, was President. Seven members were admitted during this year, of which three became Presidents of the Society, Drs. J. S. Thorne, George Marvin, and Samuel Boyd. At the end of the year thirty-one names appeared as members of the Society. Dr. Thorne became Vice-President in 1844, and President in 1846; holding the position of Censor in 1851.

In 1843, Dr. Thorne became a member of the Brooklyn Board of Education, retaining his membership until 1872; in 1868, he was elected President of the Board, retaining the position until his retirement in 1872; and so far as known to the writer the only physician that has ever held that position. John Harrigan, M.D., has for a few years held the position of Vice-President of the Board.

In 1844, he was elected a Trustee of the Brooklyn Female Academy. In 1854, he became a Director in the Packer Institute of Brooklyn, remaining as such until 1880. He was a life member of the Long Island Historical Society, and a Director in the Society of Old Brooklynites, member of St. Ann's Protestant Episcopal Church, and a Director in the Long Island Insurance Company and Firemen's Trust Company.

His writings consist chiefly of reports of the various institutions with which he was connected.

Briefly then have I presented the life work of one of our members. What a glorious record of usefulness. Well may his children be proud to call him father, and many who are now grown up to manhood and womanhood look back to their days of youth

ARNOLD STUB, M.D.

with a thank you upon their lips for the advice and instructions received from him, who devoted the major part of his life to their benefit and education, and was a pioneer in the hospital work of our city. View its magnificent proportions to-day, and think of the small beginning, and to maintain even that beginning required the active and earnest support, and frequently the financial assistance which came, as a rule, from the medical men connected with the institution, for the people at large were not educated to the necessity of having a hospital within the city, where the injured could be taken and cared for.

It will become apparent to the readers of the JOURNAL, as we proceed with these short sketches of our former colleagues in the medical profession, that they were manly interested, as we now are, in every thing that tended to improve the condition of those around and about them. Dr. Thorne was no exception to this rule, entering upon the practice of his profession in the Village of Brooklyn, which contained at that time a population of about 20,000. He lived long enough to see it the third city in the Union.

WILLIAM SCHROEDER, M.D.,
Secretary of the Historical Committee.

ARNOLD STUB, M.D.

The record of life is simply that which we accomplish as individuals. Many of us begin life with a bright future before us, which may or may not be maintained during life; others again step out into the world with no prospects before them, except a determination to succeed in a chosen profession or industry.

The subject of this sketch was born in Elbing, Prussia, February 5, 1832, and died at Dayton, Ohio, February 1, 1898. His father, William J. Stub of Elbing, Prussia, was a man of standing and influence, and respected by all who knew him. His mother, Emelia Matilda Taurnier of West Danzig, Prussia, if we accept the Doctor's words, must have been a woman of noble character, and possessed all the qualifications which go to make up the true woman, wife, and mother.

Our late colleague's early education was received in the public and high schools of his native town. Before beginning the study of medicine he spent a few years in the Royal School of Agriculture at Eldena-Pomerania, Prussia.

As considerable objections were offered by his parents to the

study of medicine, these were in time overcome, and in 1856 we find that he was admitted as a student in the University of Greifswald, Pomerania, Prussia, where he continued his medical studies until 1858; coming to America in 1859; practised medicine in the State of Texas until 1862, when he came to New York and entered the army as assistant surgeon, 19th Regiment, N. Y. S. Vol.; promoted to the position of surgeon in 1864. During his connection with the army he served in the following positions:

He was surgeon during the yellow-fever epidemic at Key West in 1862; in charge of the General Hospital at Louisiana; surgeon, artillery brigade, 19th Army Corps, and medical purveyor, Middle Military Division.

The duties of the various positions must have been performed in a satisfactory manner, as is evident from the fact that letters of commendation were received from Generals Winfield S. Hancock and George H. Thomas, which were complimentary in their nature, indicating at the same time the valuable services rendered by Dr. Stub in the various positions to which he had been appointed.

After the close of the war he remained in Washington, D. C., for a number of years, and feeling the necessity of becoming more acquainted with the American method in the practice of his chosen profession, he matriculated with the Geneva Medical College, N. Y., from which institution he graduated M.D. in 1872, and shortly afterward came to the City of Brooklyn, where he remained in practice until his death.

In 1865, at Washington, D. C., he married Miss Matilda Steckel of Pennsylvania. Five children were born, two of whom died in infancy, Alma and Clara, the other three, namely: Emelia M. L., wife of John Simon; Meta Kate, wife of A. S. Beer, and Matilda C. C., wife of Walter Schuman, American Consul at Mayence, Germany, together with the widow, survive him.

The Doctor's connection with medical societies was: Medical Society, County of Kings, 1877–98; Brooklyn Pathological Society, 1893–98; The Medico-Chirurgical Society of German Physicians, N. Y., 1886–90; Brooklyn German Medical Society, 1890–98; Medical Microscopical Society of Brooklyn, 1887. Contributions to the medical literature were as follows: Epidemic of Yellow Fever at Key West in 1862. Cholera Asiatica and Cholera Nostras; Diagnosis and Treatment, 1885. Report of Tumor of the Mammæ, 1888.

Thus is the life work ended of one who will be missed by a large circle of friends, who was an honor to the profession of medicine in this city.

WILLIAM SCHROEDER, M. D.,
Secretary of Historical Committee.

CORRESPONDENCE.

REGULATION OF SEX; REMOVAL OF STOMACH.

BERLIN, February 6, 1898.

The excitement and discussion anent the Schenck discovery subsided as quickly as it arose. So completely has Herr Schenck been forgotten that his name is not mentioned now in medical circles, save perhaps over mugs of beer, occasionally, in the cafés. Word comes from Vienna, however, that his house is still besieged by ignorant but wealthy people seeking to become the parent of boys.

In the medical societies discussion is now rampant concerning the recently reported total extirpation of the stomach by Dr. Schlatter of Zurich. Several surgeons have brought forth copies of medical journals in which they have reported cases similar to Dr. Schlatter's. From these the deduction is conclusive that Dr. Schlatter's operation was not such an original and startling affair as depicted.

Cases do not arise every day (or year for the matter of that) where total excision of the stomach is deemed necessary. Yet when such a contingency arises, there is not a prominent surgeon in Europe but would dare to do just what Dr. Schlatter did for his old lady in Zurich.

His case and the others that have come to light in the medical discussions following it, prove to us that the human stomach is not a vital organ—that the human being can not only live but wax stout without it. Of course, experiments on animals have shown, long before anything of the kind was attempted on the human being, that they could live and thrive minus a stomach. This has been known to medical men who keep in touch with the modern scientific experimenting going on in the large cities of Europe and America—but not so much in America.

But the general public has not before had the knowledge vouchsafed to them. It should prove welcome news to dyspep-

tics and hypochondriacs—this fact that they can get square on their stomachs. It is not necessary to have a tumor connected with your stomach—all you have to have is a grudge against it; then, by going to a good Continental surgeon and paying him a fat fee, you can get quits on your stomach forever.

To persons who do not understand the human anatomy, the removal of the entire stomach must seem like a startling proposition. To many men their stomach is their all, and to remove that would be to remove the main pleasure in life. But now that they have Dr. Schlatter's case before them, they can see how greatly they have been mistaken. The removal of her stomach was the beginning of happiness in life for Anna Landis, the patient of Dr. Schlatter. She can eat turkey and cranberry sauce now without the thought of post-prandial distress in her middle. She will never be sick to her stomach, for she has none. She can look with superior satisfaction on her suffering dyspeptic friends and advise them with authority on the remedy they should take for their ailment.

A description of the operation as performed by Dr. Schlatter is interesting. Miss Landis had been suffering for years with a pain in her stomach. All the doctors in her vicinity could not help her. She was worn to a skeleton from inability to keep any food in her stomach, when she consulted Dr. Schlatter. He examined her and discovered only what the other doctors had known—that a tumor involved her stomach from beginning to end—but he decided to do what the other doctors were afraid to undertake, *i.e.*, to remove her stomach entirely.

She was placed under an anesthetic and the tumor was removed. With it necessarily came the obstreperous stomach. Dr. Schlatter was then confronted with the problem how to unite the end of the esophagus with the end of the intestine. They would not meet without stretching, and that would never do.

Now those versed in anatomy know that from its attachment to the stomach the intestine makes a sharp turn to the left and rises slightly. About a dozen inches from the severed end this intestine was found to be easily reachable by the end of the esophagus. Accordingly, the severed end of the intestine was sewed up tight and a slit was made in the knuckle of intestine nearest to the esophagus. The end of the esophagus was inserted in the slit and sewed there, making a direct channel from the patient's throat down through her intestines with a foot of small

intestine projecting off to one side, like a large edition of the vermiform appendix.

The pulse immediately after the operation was only 100, but it became 140, and even 160, later on. The patient was nourished for several days by means of enemata of milk, eggs, and brandy, and then nourishment in the shape of milk, bouillon, and brandy was introduced through the mouth with no bad effects. This, of course, was done very carefully by Dr. Schlatter himself, and the effect watched very closely. To cut a long story short, Miss Landis ate and assimilated half a chicken one month after the operation, and is now healthy and well, gaining rapidly in weight, with clear skin, clean tongue, good appetite, and good digestion.

This is a synopsis of the case. From it we are to deduce what we logically may. The first point that impresses itself on the mind is that the human stomach is not a vital organ. Then we can see that its importance has been grossly exaggerated. A patient can not only live but grow fat without it, the intestines being equal to the whole labor of digestion. And last but not least, happiness is not always dependent upon a full stomach, as happiness has been proven to be present when that organ was immersed in a jar of alcohol upon a shelf.

But most of us (especially the male portion of us) will prefer to retain our stomachs, even though they sometimes become unruly and retaliative, if only to bear out the reputation we have of being more amiable after a hearty dinner, If we had no stomachs, when, pray, could our wives coax us for new bonnets and sealskin coats? So that, after all, removal of the stomach will not become as popular a procedure as removal of the appendix vermiformis.

The very latest microbe to be discovered was found to inhabit ink—common writing ink. His début to the medical world was made under the auspices of Herr Dr. Marpmann of Leipsig. Dr. Marpmann has made bacteriological examinations of sixty-seven specimens of ink used in schools. For the most part these inks were made with gall-nut and contained micrococci, bacteria, and saphrophytes. An ink made with nigrosin, taken from a bottle freshly opened, contained saphrophytes and bacilli. A red ink and a blue ink were also rich in bacteria.

In two cases Dr. Marpmann was able to obtain, by the culture of an ink made from nigrosin, a bacillus, which, on inocula-

tion, killed a mouse in four days. This ink was taken from a bottle which had been left uncorked for three months.

The practical conclusion to be drawn from Dr. Marpmann's researches is that in schools the ink should not be left exposed to the air and that during recess the inkpots should be kept closed. It may be very dangerous to prick one's self with a pen, not because of the irritating property of the chemical ingredients of the ink, but because of the microbes which it contains, and which cannot be inoculated without danger.

With more truth than he knew of did some poet say, when speaking of a writer, as "distilling venom from his pen," for we may very fairly take the word "venom" to mean a microbe.

VICTOR NEESEN, M. D.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

TWENTIETH CENTURY PRACTICE. Vol. XIII. Infectious Diseases. W. Wood & Co., 1898. Pp. 621.

This volume opens with the statement, "That the infectious diseases are caused by certain micro-organisms has been positively demonstrated." There follows a demonstration of the method by which bacteria cause disease. It will be of great value to those who have been unable to keep pace with the great advances made in this department of knowledge. The facts are presented in an inviting manner. One is impressed with the mathematical exactness of the procedures which have led up to the discovery of such facts. One is also led to exclaim with the author, that, thanks to the labors here described, the future investigator can proceed upon lines as truly scientific as those which guide the researches of the chemist and the physicist. That is a great fact to be able to record. It is the duty of every practitioner to read that record.

We are carried along through this subject in a logical way. We are first presented with a classification of bacterial poisons. Then we are informed how such poisons act when they enter the body. The condition of immunity is described—that resistance to infection the human organism exhibits so often. The serum treatment is then taken up. It would be well for some of our skeptical brethren who continue to deny the efficacy of the antitoxin treatment of diphtheria to read this chapter. They will find here a mass of facts which may possibly convince them that the antitoxin advocates are at least not wholly empirics. They will find, if a reason for the faith in a particular line of treatment is called for, that there will be at least one class who can produce positive evidence.

The diseases produced by water contamination are next taken up in a general way. This is a very important chapter. We are told of the diseases

caused by non-living matter and those caused by living organisms. This is a chapter that deserves most careful study. Some of the acute specific diseases are described in the last section of the book. We close this volume with the feeling that it is one of the most satisfactory we have examined. It is a valuable addition to medical literature. It is positive evidence that the study of medicine is as truly scientific as other departments of knowledge.

TRAUMATIC INJURIES OF THE BRAIN AND ITS MEMBRANES, with a Special Study of Pistol-Shot Wounds of the Head in Their Medico-Legal and Surgical Relations. By Charles Phelps, M.D., Surgeon to Bellevue and St. Vincent's Hospitals. 8vo. Illustrated. Pp. 582. New York: D. Appleton & Co., 1897.

This work is designed to be a concise and systematic exposition of the injuries which the brain suffers from external violence—a division of brain surgery which is of the greatest practical importance, and which has received the least careful attention. Many competent authorities have been consulted with reference to certain portions of the subject, and due credit in all cases has been given for such assistance, but the great mass of collected case-histories and tabulated statistics has been collected by the author himself, and the important conclusions reached are based upon five hundred consecutive and recent cases which came under his personal observation.

The secondary involvement of the myelencephalon in a pyogenic process has been frequently observed; the ultimate pathology in such septic cases and the degenerative changes which so often occur have been studied along the lines indicated in the exhaustive volume of MacEwen upon this subject.

The volume is divided into two parts: "General Traumatic Lesions," and "Pistol Wounds of the Head."

In Part I. the classification is based upon the relation of the injury of the brain to the cranial fracture. This classification is admitted to be open to criticism, but no better one seems available. The opening chapter is, therefore, devoted to the subject of cranial fractures, and the definition, divisions, and other topics mentioned form a key to the subsequent chapters.

The pathology, symptomatology, diagnosis, prognosis, and principles of treatment are successively made the subjects of chapters, and in the subdivisions of each the author has been logical and comprehensive. The differential diagnosis of unconsciousness due to various causes and the differentiation of traumatic lesions from each other is as clear an exposition of these complex conditions as can be found in literature.

As a result of a careful statistical study of the five hundred cases the prognosis of encranial injuries is placed upon a more stable foundation than ever before. The surgical perspective is well preserved, and the relative danger of individual symptoms and of secondary inflammations is carefully considered.

No attempt is made to describe the methods or technic of brain surgery, but the general principles underlying such operative procedures are accurately stated.

Aside from the tabulated statistics already mentioned, the volume has a distinct and permanent value to both the professions of law and medicine, owing to the careful study of pistol-shot wounds of the head which are taken

up in Part II. The opening chapter is devoted to the results of numerous experiments upon the cadaver and of corresponding injuries observed during life; it is the most complete and valuable in the book. In the experiments, pistols ranging from .22- to .44-caliber and of varying efficiency were used, and the results carefully photographed. The effect of distance, the degree of cranial penetration, the character of the wound of entrance and the wound of exit, and many similar practical details were thus studied with accuracy, and the numerous full-page reproductions of these photographs form a unique and important series.

In the methods of diagnosis the telephone probe and the use of the Röntgen-rays have an important place, although the older methods are by no means ignored. The best methods of treatment are indicated.

The volume closes with the condensed histories of three hundred intracranial traumatisms, verified by necropsy in most instances.

The pistol is preeminently the weapon of civilization at the present day. The wounds inflicted by rifles and by still older weapons have been studied from time to time, but no such treatise as this of Dr. Phelps' has as yet appeared. Medico-legal questions in this domain are constantly arising and are often of great importance. The author deserves the thanks of both professions for the valuable book of reference that he has contributed to the scanty literature of this important subject.

HENRY P. DE FOREST, M.D.

DISEASES OF THE STOMACH. Their Special Pathology, Diagnosis, and Treatment, with Sections on Anatomy, Physiology, Analysis of Stomach Contents, Dietetics, Surgery of the Stomach, etc. In three parts. By John C. Hemmeter, M.B., M.D., Ph.D., Clinical Professor of Medicine at the Baltimore Medical College; Consultant to the Maryland General Hospital, etc. With many original illustrations, a number of which are in colors, and a lithograph frontispiece. Cloth, $6.00.

In this volume we find a very complete exposition of what is known of the anatomy and physiology of the digestive organs, the methods and technics of diagnosis, the therapy and materia medica of stomach diseases, and the symptomatology, diagnosis, etc., of these diseases.

The work was undertaken to acquaint the general practitioner with all that has been done in this important branch of medicine. As guarantees of its thoroughness and wide scope thirteen bibliographic tables are given, covering thirty-three pages. They add greatly to the value of the work. We note that the American clinicians have justice done to their achievements in this branch of medicine. That is more than can be said of some other works.

The author has produced a volume which treats of the subject in a broad way. After thoroughly dealing with the influence of disease on the organ itself, he goes farther and points out its secondary effect on remote organs. Again, he shows the influence which diseases in important organs have in producing gastric disorders.

He describes a number of entirely new methods of diagnosis.

We wish that our cooks could absorb the chapter on "Dietetic Kitchen"

and "Diet Dishes." It is a marvel of completeness and good sense. The axiom of the chapter is that the palate is a skilful guide in the regulation of diet. Numberless are the patients who will bless the author for emphasizing that fact. The chapters on surgical treatment are very important. Here the fundamental factors influencing the rate of mortality in gastric operations are set forth minutely. We are impressed by the statistics of a large number of operations. The fact is clearly brought before our minds that antiseptic surgery has done much in this department to prolong life.

The chapters on neuroses of the stomach are very full. We commend them to the study of those who are skeptical as to psychic influences.

To review this book properly would be to reproduce it in full. We may say without reservation that it ought to be in the possession of every medical man. When we have said that we have discharged our duty faithfully as a guide in the selection of books. We are sure that the volume will bring to the author an enviable reputation as a scholar and benefactor. We congratulate him.

DISEASES OF THE EYE. By Edward Nettleship, F.R.C.S., Ophthalmic Surgeon at St. Thomas' Hospital, London, etc. Revised and edited by W. T. Holmes Spicer, M.A., M.B., F.R.C.S., Ophthalmic Surgeon to the Metropolitan Hospital and to the Victoria Hospital for Children. Fifth American, from the sixth English, edition. With a supplement on "Color-blindness," by William Thomson, M.D., Emeritus Professor of Ophthalmology in the Jefferson Medical College of Philadelphia. Handsome 12mo. of 521 pages, with 2 colored plates and 161 engravings. Cloth, $2.25. Lea Brothers & Co., Publishers, Philadelphia and New York. 1897.

"Nettleship on the Eye" is justly regarded as one of the best text-books which can be placed in the hands of students and general practitioners. We would not imply by this statement that it is not adapted to the wants of the specialist also, but many books which are valuable to those following a specialty are entirely unsuited to the needs of the other and larger class. That "Nettleship" has met with great favor is shown by the fact that it has reached its fifth edition.

A TEXT-BOOK OF THE DISEASES OF WOMEN. By Henry J. Garrigues, A.M., M.D. W. B. Saunders, Philadelphia. 1897. Second edition, 692 pages.

A second edition of this book bespeaks the appreciation of a discerning and appreciative portion of the medical profession. The interest of the work is not only maintained, but strengthened, in the elaboration by the author.

If one portion of the book commends itself to a critical mind more than another, mention might be made of the careful discrimination in matters of diagnosis.

One topic is omitted which, in the opinion of the reviewer, seems almost a defect: that of extra-uterine gestation; but it is presumed the author would relegate that to the distinctive province of obstetrics.

WALTER B. CHASE, M.D.

MISCELLANEOUS.

REUBEN JEFFERY, M.D.

Dr. Jeffery, so well known to the profession and people of Brooklyn, has removed to Norwich, New York, which is, we believe, the Doctor's birthplace. We congratulate the people of Norwich on their gain, while sympathizing with his many friends in Brooklyn.

EX-INTERNES OF THE LONG ISLAND COLLEGE HOSPITAL.

The ex-internes of the Long Island College Hospital have formed an association for the perpetuation of hospital memories, and inaugurated their history by a dinner at the Clarendon Hotel on March 30th. The officers for the ensuing year are: president, F. E. West; secretary, B. O'Connor; executive committee, H. N. Read, J. A. McCorkle, S. J. McNamara, and the president and secretary, *ex-officio.*

NATIONAL COMMISSION OF PUBLIC HEALTH.

The bill now before Congress to establish a National Commission of Public Health has the endorsement of the American Medical Association and the American Public Health Association.

POCONO BIOLOGICAL LABORATORIES.

Our former townsman, Richard Slee, M.D., has established at his home, Swiftwater, Penn., laboratories for the production of vaccines, antitoxins, and other therapeutic animal products, and is prepared to furnish vaccine virus on ivory points, or glycerinated virus in capillary tubes or in Sternberg bulbs. Dr. Slee's familiarity with bacteriology and his conscientiousness in the performance of whatever he undertakes are a sufficient guarantee that implicit reliance can be placed on the products of his laboratories. Those who do not know him personally will be satisfied when they learn that the plant is constructed in strict compliance with the exacting requirements of the Pennsylvania State Board of Health, of which board the doctor is an officer.

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

ENTERED AT BROOKLYN, N. Y. POST OFFICE AS SECOND CLASS MATTER.

EDITOR IN CHIEF:
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VOL. XII. No. 5. WHOLE No. 125. | BROOKLYN, N. Y., MAY, 1898. | Single copies 25 cents $2 a year, in advance

ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

I

THE TREATMENT OF INCOMPLETE DEVELOPMENT OF THE UTERUS.

BY ALEX. J. C. SKENE, M.D., LL.D.

Read at the meeting of the Brooklyn Gynecological Society, December 3, 1897.

That form of imperfect development of the uterus known as anteflexion, received much attention at the time when J. Marion Sims and his *confrères* were upon the pinnacle of the professional temple. A number of theories regarding the pathological anatomy of this flexion were freely discussed, and a number of ways of management were advised and practised. The special attention that was given to the subject no doubt arose from the fact that the affection is the cause of a great deal of human suffering in the form of dysmenorrhea, and also sterility.

As you very well know, dividing the cervix and keeping it from uniting so as to shorten or straighten the canal of the uterus was freely practised after it had been introduced and commended by Sims. Dilatation to a limited degree of the uterine canal and the use of stem pessaries also became quite fashionable treatment. Many others, such as dilatation with the sponge tent and replacement or straightening of the flexed uterus and endeavoring

to keep it in place by means of mechanical supports, were practised and accepted as the best known treatment at that time. But of late years very little has been said or written upon the subject, that is, comparatively little. This has been attributed to there being fewer cases of imperfect development at the present time than in the past. This, I am sure, is not the explanation or the reason for the subject being less noticed. According to my own observation, and that of others that I have discussed the subject with, there are just as many cases of imperfect development as there were at the beginning and during the early part of the last decade. Again, it might be that the treatment employed in the time referred to may have been entirely satisfactory, and that gynecologists have gone on treating those cases quietly; that is to say, without referring to the subject in open discussion or in the literature of the subject. This, too, I believe, is open to question in view of the fact that surgeons in our time have manifested a stronger desire to make reputation by discovering new and startling ways of operating rather than to acquire thorough practical knowledge of established methods. I am inclined to believe that this partial silence regarding flexions of the uterus, is due to the fact that surgeons during the past fifteen or twenty years have devoted the greater part of their attention to abdominal and pelvic surgery of the more heroic and destructive character, and to many, the more attractive branches of the science and art. That is the reason, at any rate, that I have deemed it expedient to call your attention to the subject on this occasion.

When the pathological anatomy of flexions of the uterus became more thoroughly understood and it was conceded that flexion was a malformation due to some imperfection in development of the uterus, and not a displacement, it then dawned upon the surgical mind that the treatment heretofore practised for the relief of this condition was not based upon the most accurate or rational of principles. It was then noticed that while Sims' operation, as it is called, would relieve dysmenorrhea, and in some very rare cases overcome the sterility, it was also noticed that if the sterility was not overcome, the patient's troubles all returned. The dysmenorrhea gradually came back, and added to that, all the local discomforts and reflex disturbances which we attribute, and I believe rightly, to laceration of the cervix uteri. And so it was found by good observers that in case of failure to overcome the sterility, the patient's condition became worse after that form of treatment than before. The same, to a certain limited extent,

might be said of the other forms of treatment with a stem pessary, dilatation, and so on.

Not only were these methods of treatment not entirely satisfactory in all cases, but there was much danger attached to some of them. The stem pessary came to be looked upon as a dangerous mechanical appliance, and the sponge tent was found to be of such a dangerous character that it was given up entirely. In justice to the subject I must say that to a great extent these unfortunate or dangerous results were due to faulty methods of practice, which were employed before the days of aseptic surgery. In no department of surgery is cleanliness of more importance than in this, and hence I believe that many, if not all, of the bad results arising from the use of the stem pessary and from dilatation are attributable to neglect of aseptic surgery. I have had abundant opportunities for observing the results of the accepted ways of treating flexion of the uterus as practised by others, and I have also been able to try many times almost all of the different forms of treatment referrred to, and I might bring forward data in abundance to show that the results have not been all that could be desired, or all that is quite necessary; but that would occupy an amount of time which you cannot afford to give me, and more than that, I should simply be bringing before you facts with which you are already quite familiar. It will suffice for the present to say that a more thorough knowledge of the pathology of this condition has led, to a better understanding of the causes which give rise to it, and knowing that it is due to an arrest of, or an interruption in, the process of development, one is lead on to the investigation of the means of prevention of these conditions.

I am quite persuaded at the present time that attention to this subject during the formative stage of the life of women, or I might be more specific and say that during the period of secondary development, if due care is given to avoiding the causes of these imperfections of development, more benefit can be bestowed upon the race than by all the surgical treatment that has been devised and put into practice, for the relief of those conditions established in the more advanced stages of the life of the individual.

The subject of lesions of development and the causes thereof is one of such magnitude that I, on this occasion, can only refer to the fact that such lesions occur during the development of the embryo, and also at puberty during the period of secondary de-

velopment of the uterus. That they may occur at other periods may be true, but we only know a little about the two periods referred to.

The lesions of development that occur during the life of the embryo are but imperfectly understood, and in consequence little is known about what to do to prevent them. Most attention has been given to the secondary development, and the malformations that occur then. The grosser or simple changes of structure which appear as a result of incomplete or imperfect development during the period of puberty, are: forward flexions of the body of the uterus, forward flexions of the cervix uteri, and forward flexion of both. This classification is based upon the theory that this condition is a malformation, and so we speak of varieties of this condition rather than degrees, as usually given in the classification of the books. The structural changes observed are defects or deficiency of tissue at the points of flexion, usually at the juncture of the body and cervix uteri. The actual anatomical lesion is most marked in the anterior wall, but the posterior wall at the point of flexion is usually deficient. Many of these cases are simple, uncomplicated, but there are many in which there are other lesions of structure that have to be taken into consideration. In some, all the tissues of the uterus are soft and lack the proper consistency; in others, they are unduly indurated or hard; especially is this the case in regard to the tissue immediately beneath the mucous membrane of the cavity of the uterus. These two forms of imperfection of structure are quite common and occur as complications, and when present they lead to the belief or to the conclusion that they are the result of some imperfection of development during embryonic life, and not alone due to some defect of secondary development at puberty. This is also confirmed by the fact that there is another kind of lesions very often found in connection with flexions of the uterus, and that is rudimentary uterine fibromata. In fact, it was during my investigations of this subject that I discovered the fact of uterine fibromata being congenital, in many cases at least—and, I believe, always congenital—and that the geneses of these uterine fibroids are due to some lesion or malarrangement of the fibrous tissue of the middle coat of the uterus. This whole subject of the maldevelopment during embryonic life is not more than half understood. There is very much yet to be investigated before the required information can be obtained regarding these malformations.

My own investigations, as I have already said, have only led me to the firm belief that many malformations of the uterus seen in after life begin during embryonic life. Of course there is this to be said, that although it might be proved beyond any doubt that lesions of development are likely to occur, and do occur, during embryonic life, I doubt if much could be done in the way of preventing them. As a matter of fact our knowledge is limited to the causation and results of lesions of development that occur at puberty; and basing the treatment upon the causation of incomplete development, we are enabled to do much toward preventing such lesions so that active surgical treatment, such as I have referred to, may be avoided. In the first place, in a long-maintained malposition, as for example the position occupied by school-girls while in school, and in much of their time when out of school, sitting in comfortable but not healthful positions, the nutrition of the developing uterus is necessarily interfered with. At the same time pressure about the waist from corsets and heavy skirts, constipation and pressure of the abdominal viscera upon the pelvic organs interfere with the maintenance of the normal position of those organs, and also the return circulation from the pelvis. This is simply a hint regarding one factor of the general causation of many cases of flexion of the body of the uterus.

Again, it should be borne in mind that the nutrition of the sexual organ depends upon the nutrition of the general organization. In other words, the nutrition of the pelvic organs is wholly dependent upon the general nutritive system for its supplies, and sustenance or maintenance. Anything, then, that in early life, especially at puberty, interferes with this general nutrition, is most likely to end in incomplete development of the uterus.

The malpositions assumed in daily life, as we have already hinted at, and the want of proper exercise are responsible for general malnutrition to some extent, and are contributory causes of forward flexion of the body of the uterus. Deranged innervation, arising from perverted emotions which stimulate the sexual organs to premature functional activity, and excessive brain work, which diverts the nerve forces from reproduction, interrupt development, and leave the uterus in a flexed condition. I presume that half of all the cases of incomplete development of the uterus that I have seen might be fairly attributed to these forms of deranged innervation. These are some of the best known causes of this condition which we are now considering, and are sufficient

to suggest, in a general way, the preventive treatment of incomplete development at puberty. To secure as far as possible a healthful innervation and general nutrition, and a rational adjustment of clothing and healthful exercise, indicates the outlines of the ground, but the details, of course, are very extensive because they include the many ways in which general nutrition may be deranged in young and growing girls; and the derangements of innervation which lead to malnutrition, generally and locally, are so varied and so extensive that one can do nothing more at present than to mention them. In regard to the rational adjustment of healthful employment and exercise, that, I am sure, is of great importance. To avoid maintaining a sitting—especially a stooping forward and sitting—position too long at a time, and then healthful exercise should be taken out of doors, and, so far as possible, arranged to take off the pressure from the pelvic viscera and also to stimulate the return circulation. This, perhaps, is best accomplished by horseback riding and by light calisthenics, especially that form of calisthenic exercises which can be taken in a recumbent position, and elevating the pelvis, so that the return circulation may be facilitated.

The management of the mind at this period of life is equally important in order to avoid the derangements of innervation which play an important part in the causation already referred to. Having discussed the subject in former contributions I need only allude to it here.

Unfortunately, cases of flexion of the uterus are rarely seen during the stage of development. The condition is usually well established before the patient presents herself to the surgeon or physician. More than that, the other complications that are so sure to follow this malformation are usually established before they come under our professional care. I refer to general pelvic hyperemia and catarrhal endometritis, conditions or affections which are developed from the deranged innervation and circulation, pain and suffering that arise from or are caused by the malformation and consequent dysmenorrhea. It is also a common thing, I believe, to have (in addition to the general hyperemia of the uterus and a catarrhal endometritis, or it may be adenomatous corporeal endometritis as well) ovarian hyperemia, that in time is likely to run into chronic ovaritis. When such patients can be taken in hand before these complications are established, and the age of the patient is favorable, say anywhere between fifteen and twenty, they can usually be completely relieved;

not only that, but they are likely to remain perfectly well. In such cases, when their history is sufficiently clear to enable one to make a diagnosis with a certain degree of positiveness, I prefer to anesthetize, and then complete the diagnosis and employ the treatment that may be called for. In the first place, I ought to say here, that the most absolute cleanliness and asepsis should be observed in the management of these cases, and when there is no opportunity to cleanse the parts by douches and bathing before the patient is anesthetized, then that thorough cleansing process should be carried out after the anesthesia. Then the examination should be made, and the form of flexion clearly made out, and the treatment adapted to the condition found. For example, in case the uterus is found to be rather lax or soft of tissue and the flexion is limited to the body of the uterus, and there is menorrhagia, as there often is in those cases, then the treatment should be moderate, rapid dilatation, curetting to remove any hypertrophic or adenomatous tissue that may exist there, and washing out the uterus with a solution of carbolic acid, glycerin, and water. The dilatation should be to the extent of three-quarters of an inch, or less, say half an inch, according to the size of the uterus, then in place of packing as recommended, I employ a drain, which also acts as a brace or splint, that is to say, a piece of gauze as large as can be admitted into the dilated canal, well twisted and carried up to the fundus uteri and then cut off short at the os externum. This is allowed to remain and keep the uterus in proper shape as long as it is tolerated. The moment that any irritation occurs, indicated by elevation of pulse or temperature, it is to be removed, and if the uterus is disposed to fall back into its flexed form, the packing should be repeated. The packing with the twisted gauze acts not only as a drain but as a splint, and is usually quite sufficient to keep the uterus straight in those cases of soft tissued uteri and in forward flexion of the body of the uterus alone. When the flexion forward is confined to the body of a uterus that is unusually dense in structure (and these are the most troublesome cases, because the dysmenorrhea is almost always the worst), the treatment is conducted upon the same principles, but carried out in a somewhat different way. In those cases the tissues are so dense and unyielding, that unless the greatest possible care is taken, there is great liability to laceration of the inner structures of the body of the uterus, and also of the lowest portion of the cervix. When a dilator is used that is too short, even the dilator, the blades of which dilate in a parallel way, if they do not extend to

the fundus or near to the fundus, the points of the blades are liable to become embedded in the walls of the uterus, as dilatation goes on, and do very great damage. Very great care should be taken to make the dilatation equal from the os externum up to the entrance of the Fallopian tubes. More than that: it is necessary in those cases to make the dilatation greater in a uterus of dense structure. Of course, the degree of dilatation must depend upon the size of the uterus. Often the uterus is small and dilatation to the extent of half or five-eighths of an inch is as much as can be employed, whereas, in a larger organ dilatation to an inch or less might be equally well tolerated. While the dilatation is done under an anesthetic and is completed in the shortest period of time, yet it should be conducted very gradually and very slowly, watching carefully that the tissues are stretching and not being lacerated. In case the misfortune of laceration does occur, in spite of all care, the cases usually do badly, or at least not as well as if that accident had been avoided. After the dilatation has been completed, in the same way as in the other condition just described, the same drain is introduced and allowed to remain as long as it is agreeably tolerated. It is repeated again if the uterus is inclined to fall back into its former position, although in all cases of that kind it is impossible to introduce as large a piece of twisted gauze as the first was. In the great majority of these cases there is usually amenorrhea or scanty menstruation, and hence it is not necessary to use the curette, but simply to use the gauze in the way already described.

In the majority of cases just described the treatment here given is sufficient, but if at the next menstrual period there is still dysmenorrhea, and on examination it is found that the flexion has returned in part or entirely, then it is necessary to employ the stem pessary for a time until the tissues at the weak point shall regain their strength and increase in quantity. The stem pessary which I employ is the glass rod with a flange at the end of it, choosing one that is long enough to extend up to within about a quarter of an inch of the fundus uteri, and holding it in place by a Peaslee's ring pessary closed in on one side so as to form a cup. A soft rubber pessary is more easily introduced because it is flexible, and it is more easily borne, and by the use of the douche it can be kept reasonably aseptic, providing it is thoroughly coated with white vaselin before it is introduced.

While the patient is wearing this kind of support it is very necessary that she should be under continual observation, and

that is one argument in favor of treating those patients in hospitals where they can be closely watched. I know that many have permitted patients to go around about their usual duties or occupations wearing stem pessaries, but I have never dared to take any such risk, and for that reason, perhaps, I have never had any very serious accidents follow their use. Last summer I saw a lady in the mountains suffering intensely from a pelvic inflammation caused by a stem pessary introduced by a New York practitioner who has repeatedly admitted in his writings that he is the most successful surgeon in the business. I may say in regard to the class of cases now under consideration, that is, forward flexion of the body alone, uncomplicated with endometritis, or ovaritis, or anything of the kind, this treatment is usually sufficient to relieve the dysmenorrhea and overcome the sterility in the majority of cases. I say this advisedly, because in looking over my statistics I was quite surprised to find how many of those patients were cured of their sterility; and yet some, quite a number, in fact, have not been cured. There are others who keep well for a time and the dysmenorrhea returns. That is especially so in cases of the hard or dense-structured uteri, and especially if there are some rudimentary small fibroids in the walls of the uteri. These cases are the most difficult to cure, and they are most likely to have a return of their trouble. The others are much more satisfactory in this respect.

In the cases of forward flexion of the body alone, complicated by catarrhal endometritis or corporeal and cervical endometritis, the corporeal form of the trouble giving rise to adenoma or adenomatous neoplasms of the mucous membrane and consequent hemorrhagia, it is always advisable to cure the general hyperemia and the cervical endometritis as far as possible, before submitting the patient to the dilatations and subsequent treatment. When there is added to this hyperemia of the ovaries that should be attended to also. It is unnecessary to add that the best constitutional condition of health should be obtained before undertaking the surgical treatment. This, of course, goes without saying, and must be quite apparent to everybody.

Now I come to the consideration of cases of flexion of the cervix uteri. If there is flexion of the cervix alone, and the body is in its normal position, there is usually far less suffering on the part of the patient. Most of those cases come to us for sterility, rather than for dysmenorrhea, which drives the other class to us for treatment.

I recognize two forms of forward flexions of the cervix, differing entirely in their anatomy, and also in causation. In one form the cervix is abnormally long, that is, the intravaginal portion of it; in the other class there is incomplete invagination of the anterior wall of the cervix. In some of the most marked cases this incomplete invagination is clearly indicated. The process of invagination during secondary development has been arrested undoubtedly at its inception or commencement. In others there is some invagination but still not enough. This imperfect invagination compels the uterus, when it descends into the vagina at puberty, to become bent forward, and in consequence the invagination is usually greater than normal posteriorly, while it may be nil or but very little marked anteriorly. In the cases of abnormally long cervix, usually conical in form, it is necessary first to shorten the cervix. This is very easily done by dividing the walls of the cervix laterally at the os externum. A simple division with the cautery, or with the scissors, and then keeping the parts from uniting by packing, is usually all that is required. The extent of this incision on either side of the os externum need not be carried upward more than a quarter of an inch, and the retraction which follows the incisions, if they are not permitted to reunite, is generally sufficient, unless the cervix is unusually long, and then an amputation of a portion of it becomes necessary. It is better to do this as a preliminary, then the dilatation referred to, and the keeping the uterus straight as in the other cases just spoken of, is sufficient. For the relief of the other form of forward flexion of the cervix, due to imperfect invagination of the anterior wall of the cervix, I devised, a number of years ago, a plastic operation to correct the malformation. It consists simply in making an incision transversely about a half or three-eighths of an inch from the anterior wall of the cervix, which divides the vaginal wall. I then make traction upon the cervix backward so as to bring the lateral ends of the incision together. In other words, I change the transverse incision to an anteroposterior one. In some bad cases I find it necessary to separate the vaginal wall from the cervix, by separating the cellular tissue for some distance, so that the vagina will fold around the cervix, when traction is made backward and drawing the cervix into its normal position. Then the parts are held together by sutures until they unite. During the uniting process I have the patient wear a stem pessary. It is necessary to dilate the canal sufficiently to admit a medium-

sized glass stem. This is introduced and held in position while the healing process is going on, and is generally sufficient to correct the flexion; that is, forward flexion of the cervix due to this cause.

It only remains now for me to say that having given the methods employed in the treatment of flexion of the body alone, and flexion of the cervix alone, from various causes, I have only to add that in the cases that we most frequently see, and the ones that are the most in need of relief and are the most difficult to manage—I mean those having anteflexion of both body and cervix—the treatment, of course, has to be a combination of the two forms of treatment: that applied for the flexion of the body, and that necessary for the flexion of the cervix, of whatever variety it may be. For example, in a case of flexion of the body, and flexion of the cervix caused by incomplete invagination of the anterior wall of the cervix, dilatation should first be performed, and the invagination completed by the operation for that purpose, and then the introduction of the stem pessary to keep the uterus straight.

This brings me to a class of complicated cases that suffer the most and are most difficult to cure, namely: flexion, complicated with tender and painful ovaries, presumably due to congestion or chronic ovaritis; and cases accompanied with prolapsus of the ovaries. Regarding the pain and tenderness of the ovaries, when present in flexion cases, I may say, in brief, that preparatory treatment to relieve the general congestion and hyperesthesia, followed by the treatment indicated for the incomplete development of the uterus, give very satisfactory results in the majority of cases. This cannot be said of the treatment in cases of chronic ovaritis, associated with malformations. If the inflammatory disease of the ovaries is well established it is not easily relieved by treatment. The flexion may be corrected and the dysmenorrhea relieved, but the ovarian disease generally persists until degeneration of the ovaries is completed. Prolapsus of the ovaries occurring in connection with flexion of the uterus is sometimes helped by the relief of the flexion, but not always. In a number of cases I have found it necessary to shorten the utero-ovarian ligament and mesosalpinx, and in rare cases, in which there was prolapsus and degeneration of the ovaries, it was necessary to remove them in order to give relief.

Finally, I may say that my object in this communication to you was to lay before you my experience in the employment of

the several well-known surgical procedures in the management of the various forms of anteflexion and the complicating diseases frequently occurring therewith. I have been guided in this by a firm belief that there is at the present time more need for a thorough knowledge of the practice of the familiar surgical treatment than for new operations or modifications of the old. Clearer light upon pathology and causation, and more accurate diagnosis, will enable the gynecologist to make better use of existing surgical knowledge and render more useful service to suffering women than the invention of new operations.

DISCUSSION.

The President, Dr. J. C. McEvitt: You have heard, gentlemen, the very instructive paper of Dr. Skene; a paper on a class of cases which we meet with daily in both our private and hospital work. I regret exceedingly that the inclemency of the weather has prevented some members from attending and hearing this very forcible and scientific paper.

Dr. Walter B. Chase: Mr. President and Gentlemen:—It seems to me that this Society can spend its time to no better advantage than in the contemplation of the topic which has been so ably and succinctly brought before us to-night by a master in this department of practice.

If we were to refer to our individual experience and estimate the amount of suffering which came to women as a result both of pregnancy and functional activity, and were able to discriminate and say how much of it was due to imperfect development, I am confident we should be compelled to reach the conclusion that the percentage was very large. The most unfortunate circumstance connected with this, to which the essayist has referred to-night, is the fact that before these patients apply for treatment, and before they come to the physician or surgeon, the mischief is already done. When a girl just entering upon the function of menstruation, or a woman about to fulfil the highest function of her being—that of motherhood—seeks medical advice, it becomes apparent that from imperfect development the risks to herself, as regards her future health, and in some degree to her progeny, are matters which cannot be ignored or always be met satisfactorily. To my mind, Mr. President, the suggestions laid down by the writer of this paper regarding the care of girls during the secondary development, the time immediately prior to puberty, is of the utmost value,

and just in proportion as we, as physicians, have ability to instruct mothers and give advice to their daughters, who come under our observation at that period of life, shall we be able to obviate these conditions. In fact, it is ignorance that is the foundation, doubtless, of so much suffering in this direction, and it will never be overcome until there is a wider appreciation among the medical profession of the needs of attention to these cases early, and the necessity of mothers being properly instructed what to do for their daughters at this important juncture of their existence.

The author of this paper takes the view that all flexions of the body of the uterus are the result of malformation. We have been taught by some that a certain degree of anteflexion was not abnormal, and yet, tested by the standard of a typically normal uterus, any degree of flexion would be a malformation. However that may be, it is evident that there is a certain proportion of cases, in which a moderate amount of anteflexion at the junction of corpus and cervix exists, which is not attended with dysmenorrhea or any serious consequences.

As regards the method of treatment, I think that the matter of treatment has been very thoroughly covered by the essayist. I confess, in one particular, I have never gone as far as Dr. Skene has in the matter of dilatation of the body of the uterus.

I think we have all come to the conclusion that the risks attending dilatation of the uterus, either of the cervix or of the body itself, are due far less to traumatism than to sepsis. At the same time, as Dr. Skene pointed out very carefully, the matter of traumatism should be looked after and care exercised that the dilatation be not carried too far.

The suggestion of Dr. Skene that the twisted gauze which he uses in these cases acts as a support, I think is an exceedingly valuable one, and whether we shall resort to that or whether we shall resort to the glass stem will be a matter for us to decide individually. In time past I have had, I admit, very grave objections to the use of stem pessaries and have resorted to them infrequently. I shall, however, in the future, use them with less misgivings, and with the belief that under the conditions indicated and proper aseptic precautions they can be used with a very minimum amount of danger and with results that doubtless will prove highly satisfactory.

Dr. George McNaughton: Mr. President, one cannot help being intensely interested in this subject, particularly if one has

passed considerable time in a dispensary and noticed how numerous these cases are and how much misery they cause, as has been referred to by Drs. Skene and Chase.

I used to describe in my record-book at the dispensary a certain class of anteflexions as "coachman's cap." The vaginal portion of the uterus seemed to be shorter, and it was constricted around the top like a coachman's cap; and these were particularly hard cases to do much for. I used to dilate the cervical canal in the dispensary and patients would frequently return after two or three months; they were perhaps better for the first month, not so well after the second, and at the end of the third were bad again, and would come back for treatment. This is the class of cases more particularly to which I referred in my paper three or four years ago, in which I mentioned the clinical fact that this condition was frequently followed by the development of fibroids, and I am exceedingly pleased that Dr. Skene indorsed my notion to-night in his paper. I have not received many indorsements; in fact, the criticism has been pretty general. But Dr. Skene suggests the possibility of the development of the fibroid in the infant preceding the flexion. I have been watching for proof of this point for several years and I have not been able to find a uterus either proving or disproving it; in other words, I have not found a young uterus containing a fibroid, although I have seen several young uteri that have been anteflexed, and until a fibroid, a commencing fibroid, or the elements of a fibroid, are found in such a uterus, I should hardly be willing to admit its existence. Perhaps Dr. Skene has found them. I have not, and I have been looking for them. I have been looking for them for the purpose of completing my paper, which has never been published, and which seemed to me incomplete without that fact, and for that reason I have paid special attention to it.

Another point is the development of the uterus. It must be that we do not understand how the uterus is developed. If this is an arrest of development we ought more frequently to see a uterus bicornis or a uterus unicornis, but that is not the fact. We see most frequently an atrophy or want of development at the junction of the cervix and the body. It must be that there are three centers of development of the uterus. I do not quite understand this point. From continued observation as to the development of fibroids, every year I am more convinced of the fact that they are frequently produced by a flexion of the uterus.

There was one point made by Dr. Skene which struck me as

being a little different from that discovered by my study of the matter. An anteflexed uterus is very frequently found in women who are magnificently developed; women who have not a defect so far as one can discover, except the anteflexion. Those women start out as young girls conspicuous by their healthful appearance and by their activity, and are laid up or disabled only at their menstrual period as a result of dysmenorrhea. They go on and get married, with every prospect, but fail to become impregnated, are disgusted, and seek treatment; those patients come to the office first at that time, and a change soon takes place in their whole make-up. Many of them are stout, they become anemic, and it is not always from excessive loss of blood; they go on, and then we suddenly discover they have a fibroid. I have seen that over and over again. It is not a matter of small observation; it is a matter of considerable experience. And these fibroids seem to develop in a tremendously short time. I do not think, however, that they do develop in a short time. I think as the resistance of the muscular wall of the uterus decreases, the growth is quickly manifested. The matter is of intense interest. I am sure it is not understood, and I am sure the importance of it is not, and has not been appreciated, just as Dr. Skene states, and that we have overlooked a very important thing.

I believe that young girls who suffer dysmenorrhea are entitled to a proper diagnosis, and subsequent treatment if a flexion exists. I do not think they should be passed over. I do not think they ought to be told, "Well, you will outgrow this thing; wait until you get a little older; we will give you some constitutional treatment; we will give you something to relieve you at such times." I believe, as Dr. Skene says, this is the time to treat these cases; I believe this is the time to cure them, and I believe now is the time to prevent these after-effects that are so likely to come.

Dr. O. A. Gordon: We see a good many of these cases that are not willing to submit to the radical operation that Dr. Skene has told us about, and I believe that very many can be relieved by the galvanic current; perhaps not permanently, but they are not all permanently relieved by the more radical procedure.

I have been using this method in a small way for perhaps three years; not long enough to make any positive claims, but I have quite a number of patients who certainly have been remarkably benefited, if one can take their statement for it. The

mode of application is quite well-known, I think, to many members of the Society. It is very simple. I use the Law battery. The electrode is passed into the cervical canal; rarely more than fifteen or twenty milliamperes are used, beginning with five, and gradually increasing. I use the negative pole in the cervix, and recently I have adopted the suggestion of Dr. McNaughton, finishing with the positive pole. Just how the good results are brought about, I am unable to say. I simply know that they are benefited. I use a large copper electrode on the abdomen, covered with moist absorbent cotton.

The President: Do you find the malformation corrected, or is it the effect of the electricity on the structure of the uterus that prevents this dysmenorrhea following it.

Dr. Gordon: I have found that there is a moderate dilatation. The malformation I do not think is wholly corrected, but there certainly is a temporary, if not permanent, dilatation of the cervical canal.

Dr. L. G. Langstaff: I should like to ask Dr. Skene one question: Why should we believe it necessarily follows that a patient should have pain and symptoms of disease because of an anteflexion, or because of improper development? I would like to understand the rationale of it. Possibly Dr. Gordon's reference to the relief due to galvanism might indicate that it was due to mere nervous disturbance in that region.

Dr. Chas. Jewett: I infer from the few remarks that I heard from Dr. McNaughton as I came in, that he considers fibroid of the uterus a cause of anemia. I never have seen any evidence of that kind. Indeed, a good many patients with fibroids, in my observation, get along with very little trouble, except there be some complication, as hemorrhage or sepsis, or pressure effects; indeed, we see patients carry fibroids reaching almost to the ribs and experience little discomfort and no great injury to the general health.

Dr. Gordon has referred to the use of electricity. Any one who has read Beard and Rockwell on that subject might easily suppose that almost anything is possible with electricity, particularly in the matter of stimulating nutrition. As an example, they cite experiments on animals—puppies—one series treated with electricity and the other series untreated. The former series grew much more rapidly than the latter. However, I have tried galvanism in gynecology and have long since given it up.

Dr. Wm. H. Skene: Mr. President, I am sorry I came in late and

did not hear all of the Doctor's paper. In the treatment of cases of anteflexion at my clinic I have been able by slow and gradual dilatation to relieve patients of their dysmenorrhea, and a great many have become pregnant subsequent to the treatment by this method.

The President (Dr. MacEvitt): The paper is an exceedingly valuable one, and covers the field of the antique and the modern treatment. The causative influence of anteflexion has been, I believe, conceded to be due to the habits in early life of those so afflicted, if not congenital. The embryonic development, of course, we know but little about, but we do know that the habits of schoolgirls are such, the position they assume at the desk, the forward projection of the body—with the normal condition of anteflexion—causing the viscera to press upon the slightly inverted fundus and body, will necessarily produce a certain amount of flexion; and in conjunction with that the chronic habit of most schoolgirls of constipation, I believe to be one of the most frequent causes. The fact that mothers do not instruct their daughters in the physiology of the organs of generation is most lamentable, girls will grow up without the slightest knowledge of the proper physiological actions of the uterus and ovaries.

Regarding the treatment. It had been for years that I really disliked to meet with cases of acute anteflexion. The trouble does not, in the patient's mind, seem to be one of any great moment, except for the dysmenorrhea. That passes off and the trouble passes out of the mind of the patient for the time being, and it is only upon a recurrence of the dysmenorrhea at the menstrual flow that brings the patient to your office. Hence, the old treatment of spasmodic dilatation did not suffice to cure.

The variety of the anteflexions, as enumerated by Dr. Skene, was to me one of the most interesting points of his paper, each variety calling for a different mode of treatment. We are all very apt in cases of so common a disorder as that to make our treatment generally of a routine character, but from the explicit descriptions of Dr. Skene to-night, we certainly cannot do it henceforth.

Regarding the remarks of Dr. Chase as to the treatment of Dr. Skene, if I understand Dr. Skene aright, his packing of the uterus by the twisted gauze—if I understood him correctly—was only temporary, and the placing of the stem was subsequent to the removal of the gauze.

A point which was not touched upon but which is of impor-

tance—it was touched upon by Dr. Skene, but only a portion of it—is the character of the treatment; the absolute control of the patient, having her in a hospital, or if at home, under constant observation. It is a well-known fact that in some dispensaries in New York City to-day, in the out-door gynecological department, patients will apply for treatment probably for this condition, and for others likewise, demanding dilatation and curettement. The uterus will not only be dilated upon the table without an anesthetic, but curettement takes place and the patient is sent home. Now we can understand why curettement is tabooed by many at the present time simply from the fact that cases will seek advice with the statement that such a doctor had curetted them, and you find a pelvic hyperemia resulting, and to your mind this treatment of curettement is objectionable; due to the inefficient and unskilful want of proper aseptic precautions, and want of a proper conception of a dangerous practice. I remember a case of the condition described by Dr. Skene to-night. I saw the Doctor operate; it was the first case of the kind that I saw operated on after his method of treatment, and I have seen the patient since. She had complete relief from the dysmenorrhea for about a year, but there has been a gradual return of the dysmenorrhea, and it exists, not to so great an extent, but almost so as at the time prior to the operation.

Dr. McNaughton: May I correct an impression which Dr. Jewett has got? I spoke of the existence of anemia without symptoms of loss of blood or sepsis; I did not mean to say the fibroid is the cause of anemia; but I do say these patients develop a peculiar blood condition which I do not understand. There is usually present a cardiac complication. If a physician will make a careful examination of the heart he will find, almost without exception, in women who have a fibroid, some hypertrophy, particularly of the left ventricle; and there accompanies that condition a peculiar appearance—like anemia. It is a fact, of course, that many women have fibroids and manifest no particular discoloration or anything of the sort as a result of it; but many of them do, and many of them have a peculiar color, a peculiar appearance, without the existence of excessive flow of blood and without sepsis.

The President: There is another point regarding the fact of the existence of fibroids in the uterus in these cases of anteflexion. I would like to ask Dr. Skene if he has found these fibromata more frequently in the anterior portion of the walls of the fundus and

body than posteriorly, which, if so, would act as a productive cause of the flexion and would have a tendency to produce the flexion of the cervix as well.

Dr. Jewett: If I understood the President correctly, he ascribes anteflexion of the uterus to increased intra-abdominal pressure acting on the fundus—crowding it forward. It occurs to me that the pressure which obtains in the cavity of the abdomen is very much like that which would obtain if the abdomen were filled with liquid. If filled with water, the general abdominal pressure would be transmitted equally in all directions. While it might crowd the pelvic viscera downward, it could not affect the shape of the uterus, since the pressure must be equal on all sides.

The President: In reply to that I would say, if the rectum and colon were filled with fecal matter you would get your pressure, in my opinion, on the fundus.

Dr. McNaughton: Or the distended bladder.

The President: The distended bladder would have a tendency not to produce flexion but rather to straighten it; the distended bladder carrying the flexion up. When I referred to the abdominal viscera I referred to the contents of the viscera.

Dr. Jewett: The schoolgirl may double up in any shape or position she chooses without disturbing the shape of her uterus.

The President: I concede your point in that one respect, Dr. Jewett.

Dr. A. J. C. Skene: In regard to Dr. Chase's remarks with reference to the question of the extent of dilatation—one very important point in the surgery of this affection. I have, of late years at any rate, been able to dilate to the extent that I mentioned by adopting one method, and that is to make my dilatation by compressing the handles of the dilator with the hand and not using the screw. I think the jack-screw principle on which mechanics raise buildings should not be applied in this department of surgery, and I find that I am not likely, indeed, I doubt if I could produce a very decided laceration by compressing the handles with my thumb and fingers. I use the screw to hold what I have gained, and wait until the resistance gives way and then make an addition to the dilatation with the parallel dilator of Goodell by introducing a smaller dilator and dilating at four points. So I believe, if the uterus is not exceedingly dense and unyielding, that one can dilate to a sufficiently large extent without having any accident occur. Again, with reference to carrying the dilators up very high in the uterus. I will show you what I mean. I

do not know that I made myself quite clear in my paper. [Using blackboard.] Now, if the dilators are introduced up to that point [indicating a point about two-thirds of the way up in the cavity of the uterus] the result will be that the point of the blades of the dilator will be imbedded here [indicating the point just described on either side of the cavity of the uterus] and leave the upper portion undilated and make a very decided bilateral laceration of the cavity of the uterus; whereas, if the instrument reaches up to the entrance of the tubes laceration cannot occur, or is not likely to occur.

I can fully answer the next question of Dr. Chase by saying that I did not emphasize it as I ought to have done—the difference between packing and draining with gauze. Here is a packing [indicating the cavity of the uterus filled with a strip of gauze lying one fold upon another] which is not a good drain and can have no splint action at all; whereas, the gauze introduced well twisted makes a very good splint indeed, and an elastic one which will not make any undue pressure at any point and yet will accomplish the object. It can be longer worn because it is a capital drain. There is always a little oozing, after curetting especially, and drainage is an advantage. I used to pack, but I found the drainage was not good and I had to remove it very much sooner because of the irritation, pain, and distress; and the rule is, that the moment the patient has the slightest irritation the packing, gauze splint, or stem pessary should be removed at any time of the night or day when there is continuous pain. It can be reintroduced after the flurry of excitement is over. I am not sure that I have covered the whole ground; have I, Dr. Chase?

Dr. Chase: I think so. I think the use of packing so continuous as that would become pretty near a pessary.

Dr. Skene: There is one other point which I omitted to mention, and I should have done so, with reference to dilatation. There are certain cases, indeed, quite a number of them, where there is not only malformation, but there is a diseased condition of the os internum. It occurs in the form of a constriction, apparently due to either imperfect or malformed tissue, or else it is the result of infiltration, and it is exceedingly difficult to dilate. And more than that, it acts like rubber; it is elastic; you can dilate, and the moment you remove the dilator it will contract. There is no resistance in the body or cervix, but at the os internum there is very marked resistance. These cases are exceedingly trouble-

some indeed, and one has to take a great deal of time and have a great deal of patience in treating them. Nothing but a stem pessary worn for a long time will overcome that form of flexion.

There is one other point which has escaped me in your discussion——

Dr. Chase [interposing]: If Dr. Skene will allow me. I raised one question regarding the fact whether anteflexion was always an evidence of malformation.

Dr. Skene: No, sir. I did not mean to convey that idea, although I presume I did. In 99 cases out of 100 it is the result of malformation by reason of arrest of development, which I will refer to again when I speak of Dr. McNaughton's remarks. I believe that nearly all cases of retroflexion are acquired after puberty. They are usually the result of a retroversion that becomes converted into a retroflexion. But there is one condition that occasionally gives rise to anteflexion. We do not see them now as in the days when all disease was hyperemia, and all treatment was the application of nitrate of silver to the canal, and sometimes a solid stick. I refer to a closing of a Nabothian gland or glands, at the internal os. These glands become distended and form cysts. The pressure they cause produces absorption and weakens the part and permits flexion. Presumably that may develop in other ways—when the body falls over by reason of a fibroid, or imperfect invagination of the cervix permits the body to fall forward and remain so.

Now, to come to the questions raised by Dr. McNaughton. I had in mind, and was going to mention his name, and would have done so in reference to this question of the presence of embryonic fibromata in flexed uteri. I read his paper on this subject with much interest, and I also read Kelley's (of Baltimore) paper at the New York State Medical Society, and I do not know which paper was read first.

Dr. McNaughton: Mine was, doctor.

Dr. Skene: Both McNaughton and Kelly claim that in those cases of anteflexion (that I claim are cases of imperfect development) they found fibroids. I do not know that either gentleman insisted on the fibroids being the cause of the flexion. If they did, I presume they are mistaken; and more than that, the fibroid is not the cause of the flexion, but the flexion is the cause of the *growth* of the fibroid, but not the development.

And now I come to the point that the doctor brought out—the one where he challenged me—with reference to the fact of

fibroids being congenital. You find them in the infantile uterus when they are so small that they cannot influence the position or form of the uterus in any way. They occur as rudiments that you will sometimes have to find by the microscope. Now, I believe that fibroids have their genesis always in embryonic life, and I believe that the genesis of a fibroid is simply a malarrangement of the fibrous tissue of the middle coat of the uterus; that some pathological whirlwind catches up a few of the fibers and twists them around a given center, and cuts them off from the general interlacing fibers of that structure; and that many are born with rudimentary fibroids, and that they are developed in embryo. Such cases are generally found to be imperfectly developed at puberty, hence we find so often an imperfect development resulting in flexion. I believe, and I hope before this winter is closed, I will be able to show you specimens in the embryo after the third month where you can find embryonic fibroids; I further believe that we have all mistaken the genesis of fibroids occurring after puberty—they are all congenital, every one of them. I do not see how it is possible for a uterus at birth, or after birth, to develop a fibroid, but I can see how it can very easily do so in embryonic life; my investigations of specimens confirm this. Therefore, I do not believe that fibroids cause the flexion, but I do believe the flexion causes the growth of fibroids, which is a very different thing from the development of fibroids. Rudimentary fibromata may remain in an otherwise normal uterus for all time as mere specks, not larger than the head of a pin. But in an imperfectly developed uterus, or one which imperfectly performs its function—as is the case in dysmenorrhea—the deranged innervation and increased hyperemia will cause the *growth* of the fibroids unless you correct the flexion and the patient has the good fortune to become pregnant, and then those little fibroids will probably remain rudimentary. I believe there are hundreds of thousands of fibroids to-day in the uteri of women who have borne children; they remain in the rudimentary condition. So the flexion may be the cause of the growth of the fibroid, but never the cause of its development. The reason flexions and fibroids come together is that the fibroid is a malformation that occurs in embryo and flexion is a malformation of the uterus that occurs at puberty.

Now, the doctor raised the question, "If this, occurring at puberty, were a malformation, why do we not more frequently see a uterus bicornis?" Because there is evidence or proof that

the one condition occurs in embryo and the other at puberty. All the malformations by lesions of coalescence of the Müller's ducts occur in the embryo; the change of form that occurs, such as flexion, is arrest of development at puberty, because the uterus at birth is always flexed. The uterus of an infant at birth is not strong enough to stand alone; holding the cervix of an infantile uterus with the thumb and finger it will topple over. So it is a continuation of the congenital condition that results in flexion by reason of arrest of development at puberty.

Those are all the facts with reference to the questions of development and the relations of fibroids to flexion, as I understand it.

Dr. McNaughton: I would like to know your experience in regard to seeing these cases in women who were particularly well developed otherwise.

Dr. Skene: The two conditions seldom go together. The point is simply this: Flexion of the uterus is often seen in women who appear to be perfectly developed; they are fine specimens to be looked at; but they are invariably chlorotic patients, and have the imperfectly developed circulatory apparatus of a chlorotic patient—for I do not believe chlorosis means simply anemia or a condition of the blood; it means a patient with an imperfect circulatory apparatus and an imperfect reproductive apparatus. Whether in after years, with the development of fibroids, they get hypertrophy of the heart I do not know. Usually, as I see them in early life, they have small hearts and are prone to anemia because the organs and tissues that manufacture blood are at fault; so I would designate a chlorotic patient as one with faulty circulatory apparatus, defective glandular structure throughout, especially the lymphatic glands, and the structures that are responsible for blood production, and also reproductive organs; hence, dysmenorrhea, amenorrhea, and all the ills that the uterus and reproductive organs are heir to. So I do not believe that in a perfectly well-developed woman we often see flexions and fibromata. They may be large; they may be perfect types of beauty to the artistic eye; indeed, they are very often very beautiful women, because they are endowed with adipose tissue to give the beautiful outlines that the artists rave over; but they are almost always chlorotic patients; not always, but very often.

The next is the remarks of Dr. Gordon, and that brings up the question of electricity. It was my good fortune to have Dr. George M. Beard in his early days attend my clinic and try the

use of electricity in the management of those cases of malformation and endometritis, and I then learned that there is something in the use of electricity in this class of cases. If I am correct in my views of the pathology of flexion—that it is a deficiency of or a defective condition of tissue at the point of flexion—the slow dilatation that was referred to to-night and practised in earlier years, and the use of electricity added, will in some cases sufficiently strengthen the tissues at the weak point. I believe that it is conceded that galvanism has some stimulating tonic influence upon ultimate nutrition, and theoretically we would expect it would do some good. I think, however, that it would be more likely to give relief in certain cases of dysmenorrhea that have nothing to do with flexion whatsoever.

And that leads me to take up the question by Dr. Langstaff. If I remember correctly, his question was the mechanism or the cause of the pain or dysmenorrhea. Now, the dysmenorrhea of flexion is caused chiefly by the density of structure, so that the hyperemia which occurs and is at its height during menstruation, gives rise to pain from pressure on the nerves because the tissues will not give way to the increased circulation. Pain is caused in the same way by hyperemia of the periosteum; we may get pain from hyperemia anywhere when the tissues will not give way to accommodate it. That is the cause of pain in many of these cases. In the flexion of the body and cervix I think that the pain is caused by mechanical conditions; that is, the blood accumulates in the cavity of the body, distends it and causes pain; distends it until it raises the body of the uterus up and brings it on a line with the cervix, and then the discharge commences and keeps up. The reason for believing in that cause is, that the pain is usually intermittent; it precedes the flow, it is relieved when the flow comes on, and generally passes off in that way. In those cases with that history of dysmenorrhea the pain always precedes the flow and is relieved by the flow, and in those cases I find almost invariably the flexion of the body and cervix is such that the body falls over until it almost meets the cervix and makes almost a complete ball. That is the explanation of the pain in the cases now being considered. There is a dysmenorrhea in very nervous patients, which perhaps might be called a neurosis. This is characterized by its irregularity; that is the kind of dysmenorrhea that disappears when the young lady goes to Europe, and in the city when healthfully and pleasantly employed, and comes on when left to her own devices, or when

she gets a little exhausted by her school work or her every-day duties. There is another that has no relation to flexion; that is, the subacute pain which occurs in connection with endometritis, corporeal and cervical endometritis. There the pain occurs a little before the flow, is increased during the flow and often continues after it, especially if the menstruation is not profuse. That probably covers the entire ground as far as answering the questions.

The remarks made by Dr. Wm. Skene took up another subject, and that is the method of treating those cases of flexion as we used to treat some of them that would not submit to the anesthetic and dilatation—that is, once or twice a week dilating gradually, and of course slowly, by the passing of sounds and straightening the uterus. I used to practice it in this way: pass a sound each time larger than the one before, just as one would treat stricture of the urethra, and then use Elliott's adjuster. I used to pass that instrument in and turn it every way and convert an anteflexion into a retroversion to stretch the point of flexion. This was nothing more nor less than a gymnastic exercise for the uterus, and many of those cases were cured in that way if the flexion was not so marked. They were treated at the same time for general hyperemia or endometritis, if such existed.

I now come to the remarks made by the President, but the time is too short to permit my saying more than that I agree with him in all he said, and I shall only refer to one point which he raised, and that is, with reference to the dysmenorrhea returning. That is the trouble I think I mentioned, or I meant to say in my paper, that if you cured the dysmenorrhea—I mean if the sterility is cured, the patients will remain forever after free from flexion. I used to believe there was a tendency for the retroflexion to occur during the involution following parturition. I do not believe that any more, and have never seen a case get back to her old habits and bad form. But I often see cases with retroversion cured, and they have a pregnancy, and if they are not careful they will have a return of retroversion. The case the President mentioned, illustrating this tendency to recurrence, was one like many of those cases that are socially situated, as was the case that I presume the Doctor referred to.

PRESENTATION OF SPECIMENS.

Dr. W. H. Skene: Mr. President, I have here two specimens; one is a pus tube, the other a tubo-ovarian abscess. Patient forty

years of age; married fifteen years; never been pregnant. Menstruated every four weeks; rather scanty in amount and painful; had headache and nausea at that time. Four years ago said she had a ruptured pus tube and was confined to bed for twelve weeks. Early last Saturday morning she was taken with severe pain in the left ovarian region, followed by a severe chill, temperature going up to 103° F., pulse 125 to 130. On examination I found a mass on the left side and also a mass on the right. The following Wednesday morning I performed laparotomy, and with the able assistance of Dr. L. Grant Baldwin removed these two specimens. The left tube was ruptured in the removal because there was an abscess of the ovary, and it is almost impossible to remove a tubo-ovarian abscess without rupture. The odor from the pus was almost stifling. After a very careful dissection I was able to remove the right tube without rupturing it.

Dr. McNaughton: How do you know that is pus in that tube; did you take some of it out?

Dr. W. H. Skene: No; but it has that appearance.

Dr. A. J. C. Skene: That raises a very important question which I would like to put. That is, if we ever see a pyosalpinx on one side and a hydrosalpinx on the other? If I was to answer that question from my own limited experience, I would say that you may have a pyosalpinx on one side, of course, and nothing on the other, or you may have a hydrosalpinx that is unilateral, but I have never seen a case of hydrosalpinx on one side and pyosalpinx on the other; and that would lead me to doubt if it ever occurs.

The President (Dr. MacEvitt): I have seen a pyosalpinx on one side and a cystic degeneration of the ovary on the other. I do not remember, though, having seen a hydrosalpinx on the other.

MONTHLY CYCLOPÆDIA OF PRACTICAL MEDICINE.

Under this title will hereafter appear the "Annual of the Universal Medical Sciences." Inasmuch as Dr. Sajous will be the editor of the new publication as he was of the old, the profession will not lose by the change. Indeed, the mere fact that the editor has decided to make so radical a change will be accepted as a proof that the new will be better than the old.

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EDITORIAL.

BEQUEST OF THE LATE CORNELIUS OLCOTT, M.D.

Among the recent acquisitions of the County Medical Society are three oil paintings donated by the heirs of the late Cornelius Olcott, M.D. They are copies made from three of the most celebrated medical pictures in Europe.

1. "The Lesson in Anatomy," after Rembrandt's masterpiece at The Hague. The original was painted by the great artist in 1632, when he was but twenty-five years old, for presentation to the anatomical theater at Amsterdam, where Rembrandt was an ardent student. It was probably a labor of love, for it represents his friend and physician, Nicholas Tulp, the founder of the school and seven of his associates assembled about a brawny Dutch cadaver, the forearm of which Tulp is demonstrating.

The original picture has a somewhat romantic history. After being for nearly two centuries in the possession of its original owners, the surgical guild at Amsterdam, through financial difficulties, found it necessary to sell its possessions, including this picture. It was purchased by a dealer and taken over to England and sold to William I. of Holland, who took it back to the

Netherlands, where it became the chief ornament of the house of Orange at The Hague. The king paid for it about $16,000, not half of what it would bring in the auction-rooms to-day. The copy presented to the society is about five by seven feet in size and well-executed.

2. William Harvey demonstrating the "Circulation of the Blood" to Charles I.

Harvey was the physician to the king, who had given him the privilege of using the deer in his park for the purposes of anatomical and physiological research. The picture represents Harvey standing before the king showing the heart of a recently slain doe, the head of which is to be seen lying on the table.

3. "The Anatomist" by Gabriel Max.

The two latter pictures measure four by five feet, and they will both make appropriate decorations for the new building when completed. Till then they will remain in the custody of Secretary Myerle, to whose prompting we are probably indebted for the donation.

The writer learned that during Dr. Olcott's life Dr. Myerle expressed to him the appropriateness of these paintings for a position in the rooms of the new building, to the erection of which Dr. Olcott had already contributed, and was assured by the owner that he would present them to the society. After his death. Mrs. Olcott and her son Dr. Charles A. Olcott learned of the husbands and father's wish and have expressed a desire to carry it out.

Doubtless the public will have an opportunity to examine the pictures in the proposed art exhibition of the Esculapian Fête, which The Ladies Auxiliary propose to hold in the autumn.

Dr. Olcott's extensive art collection still contains what is supposed to be an original painting of Rembrandt's, representing a Dutch physician of the "old school" holding a patient's wrist according to the Galenic method of examining the pulse. It is doubtless of considerable pecuniary value, and it can hardly be expected that Dr. Olcott's heirs will feel justified in adding it to the donations described; but it could probably be secured by any wealthy and correspondingly generous person who should feel like adding to the attractions of the new home of the medical society after its completion.

A portrait of Doctor Olcott, with a biographical sketch prepared by Doctor Myerle, appeared in the JOURNAL of August, 1897.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

698th Regular Meeting, Tuesday, March 15, 1898.

The President, Dr. Joseph H. Hunt, in the Chair.

There were about seventy-five members present.

The minutes of the previous meeting were read and approved.

REPORT OF COUNCIL.

The Council reported favorably upon:

Willard G. Reynolds, Bell., 1894.

S. E. Moore, Univ. of Buffalo, 1895.

Prosper H. de Greori, L. I. C. H., 1896.

Israel Kaufman, N. Y. Univ., 1892.

Wm. Ellery Jennings, Bell., 1895.

Fred J. Kneuper, N. Y. Univ., 1875.

APPLICATIONS FOR MEMBERSHIP.

Sewell Matheson, L. I. C. H., 1895; 37 Seventh avenue. Proposed by H. B. Delatour and R. J. Morrison.

Wm. E. Thomas, 46 Hanson place, P. & S., N. Y., 1895. Proposed by Wm. Maddren and W. A. Northridge.

Bromslow Onuf, 115 South Fifth street, Univ. of Zurich, Switz., 1884. Proposed by W. H. Haynes and David Myerle.

M. J. Leland, 29 Sterling place, N. Y. Univ., 1883. Proposed by E. H. Bartley and David Myerle.

ELECTION OF MEMBERS.

The following having been regularly proposed and favorably acted upon by Council, were declared by the President elected to membership:

Robt. J. Bell.

Jas. M. Downey.

D. A. Harrison.

H. C. Keenan.

Robert Ives.

E. G. Zabriskie.

The President called attention to the fact that these gentlemen would become full members on payment of the initiation fee and

affixing their signatures to the book of by-laws; that it should be remembered that the payment of the initiation fee alone did not complete their membership, but that the signing of the by-laws was an equally important part of the procedure.

The President further announced that since the last meeting the following had complied with the requirements just mentioned and completed their membership, *viz.:*

Henry Willard Nichols.

Laurie M. Riegleman.

Tenney Hall Wheatley.

The Secretary stated that he had revised the membership list, as published with the report of the anual meeting in the supplement to the BROOKLYN MEDICAL JOURNAL, and desired the members to note the following additions:

Frank J. Fitzgerald, 516 Sixth avenue.

C. F. McGuire, 503 Clinton street.

He further requested any member whose name was omitted from or incorrectly printed in the above-mentioned list, to kindly notify him, the Treasurer, or the Assistant Secretary.

SCIENTIFIC BUSINESS.

"Hemanalysis and Its Practical Application." By Henry P. de Forest.

Discussion by A. T. Bristow and Clarence A. Foster.

"Mercurial Neuroses from Amalgam Fillings." By J. Y. Tuthill.

Discussion by Richard C. Brewster, C. D. Cook, E. A. Bogue (of New York), A. H. Brockway, A. C. Brush, and E. H. Babcock.

"Therapeutic Results in Syphilitic Neuroses." By Arthur C. Brush.

Discussed by Henry H. Morton.

REPORTS OF COMMITTEES.

The report of the delegates to the State Medical Society was presented by R. J. Morrison, secretary of the delegation, as follows:

Report of delegation to the State Medical Society made in accordance with Section 3, Chapter 14 of the by-laws.

Brooklyn, March 15, 1898.

To the Medical Society of the County of Kings.

Gentlemen:—The ninety-second annual meeting of the Medical Society of the State of New York was held in the City Hall at Albany, N. Y., January 25, 26, and 27, 1898.

On January 25th the delegates and permanent members from Kings County Society met at 356 Bridge street to the number of twenty-eight, organized and elected Dr. Wm. Browning, chairman, Dr. J. E. Sheppard, executive member, and Dr. R. J. Morrison, secretary. Plans for our work in Albany were carefully considered and duly mapped out. The following representatives from this Society were in attendance at the Albany meeting-namely: Drs. Alderton, Wm. Browning, Bartley, A. C. Brush, Braislin, Bunn, Bristow, Wm. F. Campbell, Clayland, Delatour, DeForest, Duryea, Dunning, Hotchkiss, Emery, G. R. Hall, Lucas, McNamara, Maddren, Morrison, Napier, Pilcher, J. Rankin, Shoop, Scott, J. E. Sheppard, W. H. Skene, Wm. Simmons, Warbasse, H. F. Williams, Winfield, and Dr. Shattuck as invited guest. In accordance with custom we this year had the nominating member from the First District, for which position Dr. J. M. Winfield was chosen.

In the list of papers presented there were but two from Kings County. One by Dr. E. H. Wilson on "Formaldehyd Disinfection," read by title, and one by Dr. L. S. Pilcher on "Castration for the Relief of Hypertrophied Prostate."

The work that we have been engaged in for the past year in placing us at the head of a separate electoral district was accomplished. Dr. Wm. Browning as chairman of the committee—appointed the year previously—on redistricting the State, made his report, which upon motion of Dr. Maddren was accepted and adopted. The result of this is that Kings County is separated from New York County-and has become part of the Second Senatorial district, of which we now have a majority of the members. This part of our work your delegation view with great satisfaction, as we now for the first time have a comparatively independent standing in the State Society. The gentlemen from Kings County who received recognition on the official ballot are as follows:

Dr. E. H. Bartley on Committee of Hygiene.

Dr. Geo. McNaughton, Committee on Ethics.

Dr. J. M. Van Cott, chairman of Committee on Prize Essays.

Dr. D. F. Lucas, delegate to Canadian Medical Society.

Drs. J. P. Warbasse, and W. H. Skene, delegates to New Jersey State Medical Association.

Dr. H. P. de Forest, delegate to Connecticut State Medical Society.

The following are those of Kings County who were voted members of the State Society: Drs. A. T. Bristow, Geo. W. Brush,

Wm. E. Butler, J. T. Duryea, Henry A. Fairbairn, David F. Lucas, Henry C. McLean, Robert J. Morrison, David Myerle, Henry H. Morton, Chas. D. Napier, John E. Sheppard, and Wm. H. Skene. The term of delegacy of Kings County began with the last annual meeting, and the delegates of the present term are to serve the full period of three years and to secure eligibility to permanent membership must register at two annual meetings.

Respectfully submitted,

ROBT. J. MORRISON, Secretary.

On motion the report was received and ordered on file.

NEW BUSINESS.

The Secretary presented a communication from the Brewers' Association, in reference to a bill introduced at the Pure Food Congress providing for the determining of the standard of various food-products by the Association of Official Agricultural Chemists.

The writer suggested as an amendment to said bill, "that the standard be determined jointly by the Association of Official Agricultural Chemists and such physicians, not less than five, as the President of the United States shall select from the Medical Department of the Army, the Navy, and the United States Marine Hospital, and five chemists to be selected by the American Chemical Society, said medical officers and chemists to confer and consult with the duly accredited representatives of all industries for whom standards shall be established by said bill."

On motion the following resolution was adopted:

RESOLVED, that the Society approve of the above amendment, and that the Secretary be instructed to so inform the representative of the Brewers' Association who submitted it.

The secretary stated that in the month of January it came to the knowledge of the Council that the New York Hospital wished to dispose of its library of 25,000 volumes, and that Council immediately made application to acquire the same. The New York Academy of Medicine and Columbia University had both made similar applications, and on March 7th the Secretary received a communication from the library committee of the New York Hospital stating that they had awarded the library to the New York Academy of Medicine.

The President: I understand that this library nearly duplicates the present library of the New York Academy of Medicine and that they merely expect to take out of it a few hundred volumes; hence there is a possibility that the majority of this library may

still come to Brooklyn. When we made application for it, one of the first questions they asked was if we had a building ready to put it in. If we had had the building ready, we could have presented a very strong argument for the possession of this library.

There being no further business, on motion adjourned.

DAVID MYERLE, M.D.
Secretary.

THE BROOKLYN PATHOLOGICAL SOCIETY.

November 11, 1897.

(Continued from page 175.)

HEART—ULCERATIVE ENDOCARDITIS—RUPTURE OF AORTIC VALVE.

Presented by Dr. J. M. Van Cott.

I have here the heart of a young girl, aged eleven, an Italian, who came into the hospital in a fairly well-nourished condition. At the time of her entrance her breathing was labored. Palpation of her chest revealed areas of increased fremitus; tympanic percussion note over right apex; area of dulness posteriorly; bronchial breathing over both lungs; few scattered fine râles. Temperature irregular—98.5° to 104.5° F. Spleen three times normal size. Kidneys congested. She died after four days.

The autopsy revealed this state of affairs. I show you here an aortic cusp on which there is a mycotic ulcer; there is a vegetation, and hanging from that is a large clot, which must certainly be regarded as *ante-mortem.* It has not, however, been present for any great length of time, for the reason that inside of the clot the degeneration has not progressed very far. There is here an aneurism of the valve which has finally ended in rupture, and you can see here the hole which has nearly destroyed the entire valve. This valve has been attacked by micro-organisms, and has given way under the effect of the growth of the germs and the consequent ulceration. That this case was a septic case is shown by the condition of the patient's lungs, the râles, and her temperature, and the fact that the spleen was very greatly enlarged.

ESOPHAGUS, ANEURISM OF, WITH RUPTURE AND HEMORRHAGE; LIVER, CIRRHOSIS OF; UTERUS, PROCIDENTIA.

Presented by Dr. Van Cott.

Mrs. X., aged forty, Irish, came to the Long Island College Hospital last night. Moribund and died this morning.

This case is one of the best examples of hob-nail liver that ever came under my notice. The entire mass of the organ seems to be converted into connective tissue; the surface is covered with hard nodular projections, which have given it the name of "hob-nail."

She had also complete procidentia uteri. I show you here the uterus which has been severed. This was the cervix, and I presume this was the vaginal wall, as it was drawn down by the procidentia. This thing presented at the vulva, and had been in that condition for a number of years. There is scarcely any uterine tissue left that can be recognized.

The kidneys in this case are mildly cirrhotic, and show evidences of chronic interstitial nephritis. The heart is small; the myocardium thin and pale and shows some evidence of brown atrophy. The lung showed very distinct changes due to the condition of the heart.

Here is a section from the esophagus. At one point here is a small opening through the mucosa. A close inspection of this esophagus will show the aneurismal condition of a number of its veins, and one has given way. Here is the small opening, which is certainly not more than one-sixteenth of an inch in diameter. The aneurismal condition I presume to have been due to arteriosclerosis, and I suppose the vicious surroundings, with the bad nutrition of the vascular coats, were the responsible factors in the hemorrhage, as a result of which the stomach was distended with clotted blood. This hemorrhage was the immediate cause of death.

OSSIFICATION OF THE PLEURA—MICROSCOPIC SLIDES.

Presented by Dr. J. H. Hunt.

As usual, I bring an old book—thrash over old chaff. I bring here the first pathological plates ever brought out in a regular edition—those of Matthew Bailey, first published in 1804.

Here we have a picture of an atheromatous heart from John and William Hunter's collections. It shows the ruptured aortic valve which Dr. Van Cott has just shown us, with ossification, as he calls it, of the semilunar valves; the tricuspid valves and a peculiar valve here with only two cusps, instead of three. My own specimen is also illustrated by plates showing calcification of the lung itself, and also a case of ossification of the pleura.

This case, Mr. President, I brought on my first visit to this Society, twenty years ago. This specimen at that time was supposed by those present to be unique, but we found that Bailey

and others had described it. From this specimen dates my first interest in pathology. I have no notes of the autopsy, and can only speak from memory; not being as interested as I am to-day, I was not as careful as I would be now; but it was a case of what we called ossification of the pleura. The whole pleural sac of one lung was a completely solid case; it was peeled off from the ribs, bringing with it some of the periosteum. The two pleural surfaces each of them ossified; in some places little plates of osseous matter could be picked out also between the two pleural walls. I have one of those plates here to-night. The specimen was brought here to the Pathological Society and went down to the Long Island College when the Pathological Society collections were down there, and I think it was lost; at least we have not been able to find it; but I preserved some microscopic sections which were made at that time. Here is one dated March 5, 1878, nearly twenty years ago, and shows a decalcified section made through the whole tissue of the decalcified pleura. You find here the complete Haversian system. There were spots of this that did not form the Haversian canals—just lots of bone-cells with the lacunæ that could be seen in various places, but in these old sections I think the plasma has found its way into the cells, so I do not find any except in this one place that shows it about one of the cells.

DISCUSSION ON DR. HUNT'S SPECIMEN.

Dr. Van Cott (after examining section under microscope): I will swear that it is bone in there, and it is a very remarkable thing. The origin of the bone must have come from the osteoblast of the rib. If the pleura adhered to the rib the original connective tissue is replaced by bone which came from hyperactivity of the osteoblast.

Dr. Walter Wood: I have recently seen patches similar in gross appearance on the synovial membrane of the knee-joint—syphilitic, and also patches on the tunica vaginalis in a case of hydrocele. Whether this second case was syphilitic or not I am not sure. The question whether this process is the result of a degenerative process similar to the deposit of connective tissue that we find in the adductor muscles after traumatism in cavalry riders, or whether it originates from a prenatal nidus, is of great interest. In the knee-joint case the syphilitic process was in the femur and this deposit was at some distance from any bone.

Such deposits on section are found to be calcareous deposits

only, and do not have the true bone structure. They are much more common than true ossification, with which they are often erroneously confounded.

ATHEROMATOUS AORTA, WITH HEART AND KIDNEYS OF SAME PATIENT.

Presented by Dr. F. W. Wunderlich.

I present here the heart and aorta of a patient that had very extensive atheroma. I have here the remaining portion of the aorta and the iliacs, and here are the kidneys belonging to the same patient.

PAPER: "THE CAUSE OF ARTERIOSCLEROSIS."

If some of the gentlemen will state their ideas as to what takes place in arteriosclerosis, I will be obliged.

DISCUSSION OF DR. WUNDERLICH'S SPECIMEN AND PAPER.

Dr. J. D. Sullivan: For some years I have entertained peculiar views of the pathology of Bright's disease and of atheromatous disease. I am inclined to look upon them as a constitutional disease resulting from imperfect metabolism and retention in the blood of the waste products, producing a toxemia, uric acidemia, or some similar toxic condition. Those toxins act upon the tissues and parenchyma of the organs, blood-vessels, etc., and set up peculiar degenerative processes. I am inclined to look further back than the vasa vasorum for the causation of atheroma of the large arteries, and believe the blood itself is to blame instead of the arteries.

I have had those ideas for some time, and in the treatment of such cases I always begin to treat constitutionally to eliminate the toxins from the blood. Our first thing is to make good blood by hygienic measures. I have seen better success with that line of treatment than with anything I have known.

Dr. Van Cott: I have read the article of Myeroff of the Pathological Institute of Freiburg, whose investigations are given in Dr. Wunderlich's paper. It is a very cumbersome piece of writing, and typical Russian-German. He seems to agree with Hollis on the point of local hyperplasia of the yellow elastic tissue, and yet we do not know how this hyperplasia develops nor what power of reproduction or repair the yellow elastic tissue has. The tissue itself has no cells as far as we know, and its genesis is obscure even from a histological standpoint. My own vote would be for primary lesion of the vasa vasorum. I think there is a nutritive disturbance of the vasa vasorum, and I think they have been the seat of hyperplastic changes due to irritation from toxic sub-

stances, as Dr. Sullivan suggests, and I think, as a result, localized areas of degeneration occur within the walls of the larger vessels. The primary source of the lesion is in close relationship with the question of the nutrition of the vessel itself. The fact of its being a disseminated rather than a diffuse condition, is another argument for the close relationship of disease of the vasa vasorum with the atheromatous condition. We have seen to-night a kidney and other organs in which we are apt to find hyperplasia of connective tissue which certainly, on investigation, seem to contain vessels which are irregularly degenerated. There are some portions of the vessel relatively normal, whereas other portions of the vessel are relatively degenerated by the process of arteriosclerosis. I think the sum of all the evidence I have been able to get hold of would point to the true origin of that disease in the vasa vasorum.

Dr. H. F. Risch: What I have to say on this subject is not strictly medical; it is a general deduction applied to the animal organism. As the animal organism grows, bone salts are deposited and bones grow. After the bones have grown in length and breadth and can grow no more, they grow in compactness, and the more they grow in compactness the less circulation there is through those bones and the less deposit of those substances which in younger life form bone. Where shall this material go? It must go somewhere if it is not all eliminated when the person is young, and it is not. When he is older and the circulation gets poorer, it must go somewhere, and I believe that arteriosclerosis comes from a microscopic deposit of lime-salts just in that part of the blood-vessel where the blood-vessel is most compact, because to the compact, by natural selection, it will go; that is the way bone goes to bone in the human system. It does not go to muscle, but when it cannot go to bone, after a while it must go somewhere else—it goes to the next compact part, which is the media of the blood-vessels. An inflammation is induced there by these microscopic deposits first, and then the media degenerate, and the bone plates in that way form, by attraction of particles of calcareous matter into particles of calcareous matter.

Dr. Wunderlich: Owing to the lateness of the hour I did not read that part of the paper which had treated on the cause of the disease, which I should not have omitted. I think what Dr. Sullivan says is very well founded, but there are other causes too. We know very well that the gouty diathesis has a great deal to do with the disease of syphilis, and if I should judge from my

own experience it is not only chronic infections, but also acute infections which may give rise to arteriosclerosis as well as endocarditis. In my practice two cases have occurred where I can trace the endocarditis with resulting permanent valvular lesion, back, in one case, to scarlatina, and in the other case to diphtheria. I take it that just as the lining membrane of the heart can be affected that way, the lesions may also occur in other parts of the vascular system. That effete material, due to tissue changes, if retained in the blood, will act as an irritant there is no doubt, and, of course, in such a case, hygienic measures are of more importance than medication. But I believe that the influence that some acute infectious diseases have, in laying a foundation for changes in remoter times, has been largely overlooked. I believe this is true of scarlet fever, diphtheria, and perhaps influenza, as well as septic processes. Only last spring I have seen with septicemia an acute endocarditis. In that case it passed off and left no permanent valvular lesion, but whether there were no changes in the vascular system I am not prepared to say.

HENRY P. DE FOREST,
Secretary.

THE BROOKLYN PATHOLOGICAL SOCIETY.
THE 391ST REGULAR MEETING.

December 3, 1897.

The President, Dr. James P. Warbasse, in the Chair.

The program of the evening was under the charge of Section VII.: Dr. J. M. Winfield, Chairman, and Drs. Belcher, Buckley, Clayland, Evans, Gunther, Holden, Hutchinson, Lloyd, Maine, Prout, Schroeder, Stivers, Todd, and Westhoff.

Thirty-five members present.

SCIENTIFIC BUSINESS.

Paper, "The History of the Brooklyn Pathological Society," by Dr. William Schroeder.

DISCUSSION.

The President, Dr. James P. Warbasse: There is nothing so interesting to us as the history of ourselves, and this subject, as presented by Dr. Schroeder, is open for discussion. We have with us to-night two gentlemen who certainly can say something

concerning the early struggles of the Pathological Society, namely, Dr. Burge and Dr. Prout; we should be glad to hear from them.

Dr. J. H. Burge: Nothing of special interest occurs to me, Mr. President, yet I do recollect considerable of those early days. I recall particularly the condition of things that existed when I first came to Brooklyn in 1855. I came here from New York, and naturally looked about for the medical society of Brooklyn. I called upon Drs. Cullen, Mason, and Kissam, and one or two others of the older physicians, and from every one I got the same story: that there was a Kings County Medical Society here; that they met quarterly and transacted a little business, and once a year elected officers. When I inquired particularly what was the occasion of that state of things—as certainly medical men ought to be interested in meeting together and discussing practice, points of pathology, etc.—they said: "Well, the Society was in a little difficulty; J. Cooke Hull had applied for membership and had been blackballed; he had sued the Society and obtained a judgment against it; since that it had not met otherwise than as stated." I, together with my brother who came to Brooklyn with me, and Drs. William Otterson, Dodge, Nelson Drake, Olmstead, and a few others whose names I do not recollect at this moment, met at my office and talked over the question of establishing a new medical society here. This we did, under the name of the Medico-Chirurgical Society, which has been referred to very briefly by our historian. That society gathered in some of the best lights of the profession in addition to those I have already mentioned; some of them the most active men in this region; Dr. Nathaniel Ayres, Dr. Louis Bauer, the celebrated Dr. Isaacs, and others. For about three years it was as active a body of medical men as I have ever met with, presenting a great many specimens; it was largely a pathological society, and preceded this society in its entire life. Another member of that society was Dr. Joseph Jones; he was Coroner, and by virtue of his office he brought in a great many specimens. He, Nathaniel Ayres, and Louis Bauer brought about as many specimens as we could handle or discuss. They all had large opportunities; Dr. Isaacs was connected with the Flatbush Hospital and also the City Hospital, and we did a great deal of work. Dr. Jones was there most of the period; one year, at any rate, if not two, he was president; I was president one year, and Dr. Otterson was president one year; that covered nearly the entire history of the society.

The question might arise, why did a society thus active ever drop out of existence? Simply this, and nothing more: that the Kings County Medical Society, during most of that period, had only had its quarterly meetings or its annual meeting to elect officers, and seeing that there was a society here doing active work, they woke up and came back into active life, and a majority of us, feeling that two societies were not really needed, simply dropped back into the Kings County Medical Society, there being a feeling with most of us that that was the proper Society to occupy this field.

The Pathological Society, as has been stated, began as a section of the Kings County Medical Society, and it was a good many years before it became an independent society.

Dr. Schroeder presented an album containing the portraits of the presidents of the Kings County Medical Society, with a few exceptions, for the past seventy-five years; the portrait of every president that has ever been connected with the Pathological Society, and of all but one of the eleven members who founded the Pathological Society; also, the portraits of the first faculty and council of the Long Island College Hospital, of 1860, who taught the first class in a medical college in the City of Brooklyn.

Paper, "Report of a Series of Autopsies, Showing Injury of the Abdominal Viscera," by Dr. W. N. Belcher.

DISCUSSION.

Dr. Walter C. Wood: After listening to Dr. Belcher's "book" on the subject of abdominal injuries it is hardly possible to say anything as to the treatment. The only idea one can have is a very superficial one, from listening to the rapid reading of such a mass of instructive information.

There is one thing especially that struck me; that was the report of a case where the patient was brought to the hospital ten days after an injury and died of septic peritonitis following rupture of the intestine. That type of case, which I take it is contusion of the intestine with secondary ulceration and perforation, is one which I think we ought to make a greater endeavor to recognize. I have been on the lookout for those cases and have had two of them die under my notice, without diagnosis, in the past six months. However, diagnosis is made and operation is done in the stage of contusion before rupture, with recovery; two such cases are reported by Wiggin, done two or three summers ago in Connecticut, and others are reported. But

the distressing thing shown by this paper to-night is the fact that the injuries are so multiple that even with the knowledge that comes from the autopsy we realize that the recovery is an impossibility in almost every case reported. Possibly the case I have mentioned of the contusion and late rupture, if subjected early to operation, might have had a different result; and possibly, also, that first case of Dr. Belcher's, of bladder injury, which was practically, as I understand it, an extraperitoneal rupture with secondary perforation. That draws attention to the fact that all interference with urination following injury should be subjected to immediate drainage of the bladder. Such an injury is often considered too trivial, as the symptoms from extraperitoneal rupture are so slight; yet the mortality is great, as outlined by the statistics in the latter part of the paper. I hope later to have a chance to study this report somewhat in detail, and at length.

The President (Dr. Warbasse): There are always certain defects about a paper, or about information compiled statistically. My attention was drawn to this fact in Dr. Belcher's paper referring to the large number of fractures of the ribs which were found in these cases, and I recollect the statistics for the last ten years concerning fractures of the ribs, in the same hospital, associated with this injury. Fracture of the ribs has a mortality of something like twenty per cent.; we might regard that as a very high mortality for fracture of the ribs, and it is because fractures of the ribs are so often associated with severe traumatism, and patients die from rupture of the viscera.

Dr. Wood is right in urging us to watch these cases in which there is a contusion of the abdomen and in which a possible peritonitis may develop, either from the mechanical opening of the bowel, or from a pathologic process causing sloughing, and I have always taken the ground that when the surgeon is in any doubt the patient should be given the advantage of an exploratory operation. I have opened the abdomen when I was not positive that there was a rupture of any viscus at all, and have been gratified and disappointed to find that a rupture existed.

I have, moreover, seen a number of cases in which the surgeon took a more conservative course and declined to operate. The autopsy showed very extensive injury in some cases, and it is these cases which Dr. Belcher reported to-night; not all of the cases which the surgeon has to treat have come under Dr. Belcher's hands. Another defect in a report of autopsies is shown by a case which I recognize, a case of a man who had sustained an

injury in a railroad accident. He was a brakeman, and was leaning out of the car as it swept past a station; a beam projected toward the car; he hit against this and his abdomen was torn completely open; he was thrown off the car into the dirt at the side of the track. This man I operated on soon after he came into the hospital. The report of autopsy shows no record of very extensive loss of intestinal substance, for the reason that there is no way by which the pathologist might determine this loss of substance, but I remember that in this particular case I resected one section of intestine two feet long, and another section three feet in length, and made anastomoses. The abdomen was full of leaves from the side of the track, and gravel stones and cinders, and there was a fracture of the pelvis with great loss of substance; tearing out of a part of the ilium with rupture of the external iliac artery and vein; indeed, tearing through all these vessels. This patient, after the anastomoses and cleansing of the abdomen and removal of all this torn material, rallied fairly well from his state of shock, and, indeed, seemed on a fair way to recovery, when he suddenly developed hemorrhage from the torn external iliac artery and bled to death in a very few minutes. So that from a surgical standpoint reports of autopsies are apt to be defective, but from the pathological standpoint from which Dr. Belcher has presented them to us they represent an extremely interesting series of cases.

Paper, "Remarks upon the Relation of Disease of the Heart to Short-sightedness," by Dr. J. S. Prout.

Some years ago I suppose a good many of us were shocked at the report which came across the ocean that Matthew Arnold, returning from church one day in the country, and feeling frisky and well—though nearly seventy years of age—took a handspring over a low fence in front of the house in which he was staying, and in less than twenty-four hours he was dead. I have never seen an account of the pathologic conditions that were found to exist, except a statement that he was said to have had a weak heart, and had been cautioned against any exercise of that sort. We may assume that it was simply rupture of the heart that caused his death.

The condition that occurs in near-sightedness and the condition that occurs in such dilatation of the heart as would induce rupture are so far similar, that it seemed to me worth while to direct to them the attention of this Society. Patients come to me and talk about being near-sighted, and tell me they have been told that the near-

sighted eye is a strong eye. I feel, when that is said to me, like using strong words. I am apt to deliver a lecture on the subject to the person who says it, and I find if the near-sighted person is old enough —thirty or over—that person has a very decided opinion that the near-sighted eye is a strong one, and consequently a good eye. The conditions are not always so favorable, as the patient has often found by disagreeable experience. Then I am in the habit of putting it on the person's conscience to be a missionary in that direction, for such a person can make more effective appeals in speaking to the laity than even the physician himself.

The near-sighted eye has a number of serious disadvantages, and disadvantages from the side of the eye are just as important as the conditions of the heart in dilatation. A German observer has found that about ten per cent. of the cases of blindness are due to the after-effects of near-sightedness. The proportion of cases that die from dilatation of the heart is less than this. Consequently, if I take blindness from the eye side, and life from the heart side, the eye side is more important to consider. All the cases of hypertrophy of the heart do not result in dilatation; patients may go along with a hypertrophy that is compensatory in its effect, and with care they will have an ordinary length of life. A very great proportion of myopia cases, also, are fortunately stationary, and do not go on to the condition that induces loss of sight, consequently the comparison holds again.

I can give two or three examples before going further. I recollect a patient who came to me in 1870 complaining of the eyes. I put on a weak convex glass and tested the vision, and he said it was splendid. He was then in a hypermetropic condition. I saw him five or six years later when he was seventeen years of age, and then found a near-sightedness of about one-twentieth; that is, his far point was at twenty inches. Five or six years before, when he was twelve years old, he had hypermetropic eyes, adapted to distant vision and requiring a weak glass, and at seventeen he was already myopic, and his far point was one-twentieth; this was due to a stretching of the posterior pole, giving reason to suppose there was a chance of progression with more or less damage. I have not seen him since.

Another case is that of a young woman of twenty-eight, a teacher, who came to me on the 23d of October last. She said that when she was fifteen she never thought about her eyes and did not know there was anything the matter with them.

After that—she was not sure about the time—her eyes developed near-sightedness. Some time ago she saw one of my friends, who had given her a concave glass of about four inches in focus, meaning that her near point was somewhere near four inches from her eyes. At this time she had a glass which only allowed her to see at four inches from her eye, and when I saw her in October I found she had to bring the object for the right eye up to two inches, and in the left eye there was a defect, at twelve inches from the eye, of six inches in diameter, where she could not see at all—progressive myopia, stretching of the posterior pole of the eye, thinning of the sclerotic, atrophy of the choroid, and I presume hemorrhage, which is of frequent occurrence in that region of the posterior pole, giving this central scotoma, and on the other side this extreme degree of myopia. She was unable to see what she was doing. I gave her a glass of two and one-half inches focus, which gave her vision, and with that she was enabled to read at twelve inches, with the same cautions that you would give to a patient if you found dilatation of the heart—to avoid even such little friskiness as that which caused Matthew Arnold's death.

I recollect another case; a man of seventy, and over, on whom I operated for cataract. I could not test his vision, the lens being so opaque. He came to me one day, complaining of the eye, and said he had been writing in the twilight, and wanting to finish a letter to his son, had kept on writing. I found there was detachment of the retina at the posterior part of the eye, and blindness resulted. I presume the strain of the eye, with the high degree of myopia, caused that hemorrhage at the posterior pole, that we occasionally get—and that, I suppose, occurred in this young woman just referred to—and caused the loss of sight. Luckily for him I was able to give him sight in the other eye by an operation, and he was careful enough with it to keep the eye good for the rest of his life.

I do not intend to say much upon the development of myopia, but it consists in elongation, fore and aft, at the posterior pole; an elongation of the eye, with thinning of the tissues such as we get in dilatation of the heart—thinning and weakening of the tissue. We very seldom, however, get rupture of the coats of the eye, unless from actual violence. The normal axis of the eye is twenty-three millimeters, and the axis has been found, after death, to measure thirty-three millimeters, or thirty-three per cent. increase in its length by the stretching of these tissues, the result

of atrophy of the choroid, of hemorrhage, and of separation of the retina from the choroid and from the sclerotica. The eyes of the new-born babe are found to be hypermetropic; that is, the axis is too short. They develop afterward and become emmetropic, the one adapted for distant vision. The near-sightedness develops as the child gets older, say at ten or twelve years, and increases in some cases until twenty or twenty-five, and and then stays stationary the rest of the life; in other words, if the tissues are so healthy that there is no further distension, and the sight of the eye is quite sharp at near points, and with glasses can be made good for distant objects, and in such conditions there is apparently little discomfort. The misfortune is that at the age of twelve, or fifteen, or twenty, when we find an increasing degree of myopia we cannot tell where it is going to end. We cannot say it is going to stop at twenty-five, and not increase; we cannot say that it will not go on and indefinitely extend, as in the case of the young woman I mentioned, to loss or destruction of sight. That is the serious part of these cases, and the reason I speak of it is that you may, so far as comes within your power, disabuse people of that abominable idea first mentioned. It is, you may say, only a small proportion of cases that are progressive, but the best plan is look out for these cases and prevent disease, rather than try to cure it afterward. And there is prevention in such conditions, but the prevention is not as in the heart; there the hypertrophy may be very much diminished, though the dilatation might not be much diminished. The eye, on the contrary, cannot be restored to the normal condition; it is no use to try; pressure has been tried, and every method has been tried, to reduce that anteroposterior distention of the eyeball; it is impossible to reduce it; it is diseased structure, and it does not shrink; but we may endeavor to prevent its increase, and that is where the treatment and prognosis may come in.

As to the degrees of near-sightedness, we measure it by the far-point, not by the near-point. Now, a child may read up at two inches and be able to see across the East River—that is simply good accommodation; but a person may read up at two inches, and not at six, measuring at the far-point and not at the near one. Usually if it is under twelve inches it is slight in degree; the person is incommoded at a distance, but not for reading, and will get on very well by the aid of glasses, and have comfort. If it goes to thirteen inches, up to six inches there will be more or less slight impairment of the sharpness of vision, but

with glasses and care the eyes may continue good. When it gets beyond that—that is, nearer than six inches for the reading distance—the condition is serious. One of the reasons for the seriousness there is the convergence of the optic axes. If they can read beyond six inches the convergence is slight; at six it is more considerable, and if you bring it nearer, the internal recti muscles have to exert so much force, there is strain, irritation, distension, and pressure upon the eyeball, and in that way it is supposed part of this distension of the eyeball is produced. So, if we can keep the reading distance at twelve inches we lessen that convergent strain and so tend to lessen the increase of the myopia. The myopia is dangerous in proportion to the youth of the patient; the younger the patient the higher the degree and the more likely to increase. After fifty, we do not get the degenerative changes, the detachment of the retina, separation from the choroid, hemorrhage, and those conditions.

The treatment almost follows of itself, and if you were not familiar with the subject you could almost evolve it: give the eyes rest, as the heart would be treated in cases of dilatation. When we find there is a beginning condition of myopia, the thing to do is to arrest it. The children with myopia go into dark corners, perhaps to read; they are cut off from the sports of others; a boy with a high degree of myopia could not see to play baseball, and would not join in outdoor exercise, and playing with glasses would involve a good deal of risk.

There is a moral element, also; it changes the nature of the boy; it throws him back on himself; he cannot see nature or objects or faces, and cannot take a joke. He is embarrassed and has a suspicion, like the deaf person, who is not able to keep up with things going on around him, and thinks his friends are talking about him; a near-sighted person with myopia is unable to communicate by the eye with his friends and those around him, and so suffers in consequence. The thing, then, is to lessen that near-sightedness, lessen the tendency to increase of the near-sightedness, and with that near-sightedness irritation of the eye; the sensitiveness, disturbance, and irritation of the retina and hyperesthetic condition, and we do that by putting on glasses. A concomitant of this increase of length and convergence is spasm of the ciliary muscle that simulates myopia. Sometimes it may not exist, but in a condition of spasm it may apppear to exist. Atropin puts that at rest with myopia of twelve inches, and it does not affect the reading distance. The

emmetropic eye, under the influence of atropin, with a twelve-inch glass, will read at twelve inches, the reading distance, and is not affected. We get the eye in a condition of rest, we subdue the spasm by the action of atropin on the ciliary muscle, and then with glasses they have comfort more than the normal eye gives; and as the person gets older he has to have weaker glasses for near work, the same glasses, perhaps, serving for distance.

There is often an astigmatism in connection with this condition of myopia, and you have to be on the lookout for that, and the condition of the muscles.

I have here three little tracings; one, at the top, showing the shape of the emmetropic eye, giving a vision axis of about twenty-three millimeters; another, showing a pure myopic eye, with axis elongated; and here at the bottom a tracing from a German book, magnified two diameters, of an actual section of the eyeball, in which the axis was twenty-eight millimeters (twenty-three millimeters being the emmetropic axis) designed to show the thinning that takes place at the posterior pole, and the red line will show about the position of the retina in the normal eye.

Now there is one grain of comfort for us in the cure of these cases of near-sightedness that has been suggested and done by different men—a man in Vienna has done more than anybody else, perhaps—to remove the lens. It is found that taking out the lens reduces the myopia about the same as a four-inch glass, and so if the myopia is twenty we can reduce it to ten or fifteen, may be. The myopia being say two inches, taking out the lens will get it reduced to a point where the patient can read without glasses at twelve inches, or even make it hypermetropic, so the patient will have to use a weak convex glass, and the further progress of the myopia be arrested. No reports of those cases appear as having been done in this country, and I only refer to it as one advance that has been suggested. It makes us hesitate in one respect, for an eye apparently quite healthy is damaged. The lens is absorbed; it is not taken out in its transparent condition. It is needled and lacerated, and becomes opaque, and is then let out as a soft cataract. There is risk to the eye in such a condition, and we must consider that risk. I do not know that any American ophthalmologists have done it, but on the other side of the water it has been done with satisfactory results.

The dilatation of the eye at the posterior pole may be compared with the dilatation of the heart. The weakness that de-

velops explains the danger; it occurs in but a comparatively small proportion of cases, but when it does occur it is of a progressive character. At twelve, fifteen, or twenty years of age we cannot tell which cases are going to increase. Therefore, care should be taken that the near-sighted eye should be considered not as a strong eye, but as an eye that is not a sound eye. It may stay good, or it may go to the bad, as I have tried to explain.

PRESENTATION OF SPECIMENS.

Dr. Charles D. Napier presented a case of:

SARCOMA INVOLVING BOTH KIDNEYS, IN AN INFANT THIRTEEN MONTHS OLD.

This patient, a child of thirteen months, I first saw last spring, and a diagnosis was made of sarcoma involving both kidneys. The child lived under my care only about a month and a half or two months, and died. I was fortunate enough to get a *post-mortem* examination.

When I first saw the child there were two tumors of the abdomen; the right one extended from the lower border of the ribs down to the brim of the pelvis, and from an inch to the right of the umbilicus completely around the lumbar region. The left tumor began at the lower border of the ribs and extended down obliquely, the dulness showing that the tumor was apparently about three and one-half by two and one-half inches. At the time of the child's death the right tumor extended to the left of the umbilicus two inches; and the left tumor had somewhat increased, so that the tumor, as you can see it here, was about five inches in length.

Symptoms were practically absent. The urine was clear, and showed no albumin or sugar, and only one day was there any blood in the urine during any stage of the disease, according to the mother's statement, and the water was always passed freely. The bowels were fortunately kept loose on account of the large tumors; otherwise there would have been serious trouble with them. The child grew weaker and weaker, and died, extremely emaciated.

These are the tumors I removed the day after the child's death [presenting specimen]. The right kidney is the larger. As I took it out the tumor and kidney were all together. The kidney substance is down in the lower border of the tumor, the tumor evidently developing in the capsule of the kidney. The smaller

one shows the kidney-substance a little plainer; there was evidently more of it.

The *post-mortem* is especially interesting to the surgeon. There was not more than seven ounces of free fluid in the abdominal cavity, but the tumors were quite adherent, showing that an operation would have been extremely serious even if there had been only one kidney involved. The intestines were compressed between the right tumor and the abdominal walls; the cecum and the appendix were in their normal position, but also flattened. How the bowels moved at all it is hard to understard. There was a small tumor about the size of a chestnut on the left edge of the left lobe of the liver, and also another one on the under surface of the right lobe of the liver. I did not go into the chest cavity, but that is all there was in the abdominal cavity. The other organs were apparently normal. The tumor-substance was, of course, very friable, and it has now been in alcohol since last May, and of course it is quite hardened. Dr. Thomas reported on the specimen, pathologically and microscopically, showing it was a mixed sarcoma of small round and spindle-cells.

SPECIMENS PRESENTED BY DR. G. W. STIVERS.

1. *Biliary Calculi.*—There is nothing specially interesting about this case. About forty-nine calculi found in the sac, all about the same size, fairly regular in shape, smooth, and rather soft.

2. *Fibrous Growth from Mucous Membrane of Cheek.*—Then I have also. Mr. President, a small growth which was removed from the mucous membrane inside of the cheek. The growth is about a half to three-quarters of an inch long, and as large as a person's finger. It is fibrous in structure. No microscopic examination has been made. It has shriveled up a good deal since its removal.

3. *Urethral Calculus.*—I have also a small calculus which I removed from the urethra of a male child four years old. The history of the case was that the child had failed to pass his urine, or passed very little for two or three days. When I saw him I examined the penis and saw the meatus inflamed, and I could feel between my fingers somewhere behind the meatus a foreign body. It occurred to me that perhaps the child had passed the foreign body in there himself, but on using a probe I detached a stone, and after some little difficulty removed it.

CHART: CASE OF DOUBLE PNEUMONIA; NON-RESOLUTION; DEATH.

Dr. Henry P. de Forest: I have no paper to present, but after

the paper of Dr. Risch at the last meeting upon non-resolution in pneumonia, I thought it might interest some of the gentlemen here to see a chart of a recent case of pneumonia in which resolution did not take place. The chart explains itself, and you will find noted upon it a history of the case.

A young woman, twenty-eight years of age, who had been working in a bookbindery where the work was much beyond her strength and where there was poor ventilation and poor heating. The work became more and more difficult for her to perform, and she finally contracted a severe cold. For four days she stayed home, suffering from what appeared to be an ordinary cold with mild bronchitis. She then had a marked chill, and when seen on what would be the fifth day of the disease, but the first day of the pneumonia, she had all the physical signs of pneumonia of the left lower lobe. This condition continued for five days. On the fifth day there was marked effervescence. On the sixth day, Thanksgiving, she had two very severe chills, followed by fever, the temperature going up to $104\frac{1}{2}°$ F. At this time the physical signs of consolidation of the right lower lobe were also present, and this double pneumonia continued with no let-up until the fourteenth day of the disease, or the ninth day of the second attack. On that day the resolution of the right lobe occurred, but the left lobe did not resolve at all, the physical signs remaining posteriorly practically the same as when seen at first. The non-resolution persisted, the heart action became less and less frequent, the respirations rising as high as 60, and finally, on the seventeenth day of the attack the patient died, with a temperature just before death of 106° F., a pulse-rate of 140, and respirations 56.

THE BROOKLYN SURGICAL SOCIETY.

Regular Meeting, January 6, 1898.

H. B. Delatour, M.D., President, in the Chair.

SARCOMA OF THE CLAVICLE.

Dr. A. T. Bristow presented a patient who had been operated on in the summer by Dr. Bogart for an osteosarcoma of the humerus. He came into Dr. Bristow's service on December 16, 1897. The history is as follows: F. C., aged 22; native of Germany. After leaving the hospital after the first operation—

the removal of the arm at the shoulder-joint—the patient continued well until two weeks before his readmission, when he noticed a swelling on the lower border of the left clavicle, which was very painful. It was as large as a duck's egg. It extended downward toward the second rib and laterally could be mapped out nearly to the sternum. The patient was kept under observation four or five days in the County Hospital, and in that time the tumor increased in size quite rapidly; but, as the history of the recurrence had been brief, being of but three-weeks' duration, it was hoped that by removing the clavicle and the growth that he might be rescued. Accordingly, two weeks ago the clavicle with the attached growth was removed. It was not primarily an osteosarcoma of the clavicle, but it had become attached to the clavicle secondarily. It was originally a fascial sarcoma, the infection having extended from the humerus along the tendon of the pectoralis major, thence involving the muscle. The operator removed the clavicle and the tumor, first passing a chain saw through the extreme sternal end of the bone and then working toward the vessels. The sarcomatous mass was firmly attached to the clavicle, and was removed at the latter part of the operation for convenience. The operation was a difficult one and required careful attention to hemostasis. At one time there were forty-two hemostats in use. The patient, however, made an excellent and rapid recovery, and just two weeks from the day of operation he is now presented to the Society. The extreme tenderness of this growth, previous to operation, was unusual. The growth proved to be a mixed sarcoma, mostly small round cells, with an admixture of large cells. No spindle-cells have, however, been found by the pathologist.

DOUBLE MASTOIDITIS.

Dr. A. T. Bristow reported a rare case of mastoiditis (Betzoldt) in which perforation takes place internally, near the digastric groove. The history of the case, in brief, is as follows: A man of about forty years of age was admitted to the Kings County Hospital as an insane person. The interne on duty noticed that the patient had a profuse discharge from both ears, and, also, abscesses in both submaxillary triangles. The patient was seen by Dr. Bristow the same evening, and he recognized the somewhat rare condition described by Betzoldt, of which he had previously met one other case. The man's condition was bad; but it was evident that his only chance lay in prompt drainage, and

the reporter accordingly incised both abscesses, breaking up the loculi with his finger, and found, as in his previous case, that the pus had dissected its way along the inferior surface of each temporal bone, almost to the entrance of each carotid canal, and, also, downward between the layers of the deep cervical fascia. Having washed out both cavities, the operator immediately did a double mastoid operation, and removed a quantity of granulation tissue from each antrum. Had there been localizing symptoms present he said that he should have trephined for an intracranial pus focus, but there were no symptoms which justified what would have been a random exploration, nor did the patient's condition warrant prolonged operative measures. He survived the operation forty-eight hours. An autopsy was not obtained.

In his previous case the disease occurred on but one side, and recovery followed.

CALCULUS REMOVED FROM THE BLADDER OF A CHILD OF THREE YEARS.

Dr. A. T. Bristow presented a calculus removed from a boy three years of age with the following history: The patient was sent into the hospital for operation on a phimosis, but the speaker was constrained by the history to pass a searcher into his bladder, and soon found a calculus. This child is the third one that he had operated upon for calculus, all three being under three years of age. The little fellow from whom he secured this stone was just under three years by one day.

NECROTIC OVARIAN CYST WITH STRANGULATION OF PEDICLE FROM ROTATION.

Dr. A. T. Bristow also presented a specimen of rotated ovarian cyst with partial necrosis of the cyst wall. This woman came into the hospital with a history of having had an attack of peritonitis three or four weeks before, and also a concomitant history of tumor which her physician pronounced of no moment. He examined and found a rather small ovarian cyst, and came to the conclusion that as the signs of peritonitis had developed very suddenly, and as she was past the menopause, that there had been a rotation of the cyst upon its axis and a consequent peritonitis. In view of the history he operated, and on opening the abdomen found that the diagnosis was correct. The cyst was everywhere adherent, but the adhesions were recent and easily gave way. The pedicle of the tumor was twisted from right to left, and the lower portion of the tumor had become necrotic and

was just ready to break down. The cyst was of the usual dark color.

The speaker attributed the fact that the cyst did not necrose rapidly, as is usually the case, to the fact that the numerous adhesions which took place afforded sufficient nourishment to compensate for that lost through the pedicle.

A NEW SURGICAL MALLET.

Dr. Jarvis S. Wight said that in his operations he had encountered some very hard thigh bones, and has often knocked his hammer to pieces. He had had a case to operate on the previous day, and had in the meantime asked Mr. Stohlman to make him a mallet. The wood is lignum vitæ and is enclosed inside a metallic band. The mallet had just been used in a trying case and showed absolutely no signs of usage.

Dr. W. A. Tomes presented a case of appendicitis; Dr. J. B. Bogart presented a patient operated upon for cleft palate; Dr. H. B. Delatour presented a calculus removed from the submaxillary gland; and Dr. W. B. Brindsmade read a paper upon "Nitrous Oxid as an Anesthetic," and exhibited apparatus.

PROGRESS IN MEDICINE.

SURGERY.

BY GEORGE RYERSON FOWLER, M. D., ASSISTED BY RUSSELL S. FOWLER, M. D.

TREATMENT OF INOPERABLE STRICTURES OF INTESTINE AND FECAL FISTULA BY MEANS OF TOTAL ELIMINATION OF BOWEL.

Abstract from Twelfth International Medical Congress in Moscow, 1897. (*Centralblatt für Chirurgie*, xxxix, 10, 1897.)

Von Eiselsberg reported in detail his results already published and concludes on the basis of twelve cases that total elimination is indicated in those cases in which resection is impossible. In cases of intestinal fistula he reports six cures. Of six cases of carcinoma he reports three fatal cases. In all cases the author advocates attaching one end of the eliminated portion to the abdominal surface.

Von Baracz, four years ago, did a total elimination of bowel, closing the eliminated portion completely; but as the result of experimental researches, he now advocates drainage of the eliminated portion to prevent retention of accumulated secretions, and

after some months, ulceration followed by perforation and death.

Ionnesco is opposed to total elimination of bowel and advises entero-anastomosis.

Von Eiselsberg noted that the colicky pains only disappeared after passage of feces through the carcinomatous portion was rendered impossible by total elimination of bowel. He prefers axial anastomosis.

Roux advocates vertical implantation.

TIBIO-TARSAL RESECTION.

La Bonnardière (*Revue de chir.*, ix, 1897.) The following operation was first advocated by Ollier in 1865 and since then has been used in fifty cases, thirty of which La Bonnardière has had opportunity of studying by means of radiographs, etc. The operation begins with open section of the Achilles tendon at its insertion into the os calcis. Symes' incision is then employed for the subperiosteal removal of the os calcis, the exarticulation of the ankle-joint, and the removal by saw of the malleoli. The anterior and posterior calcanean flaps of periosteum are first sutured together; the flexor and extensor tendons are then sutured to the plantar muscles. By this modification of the Symes' operation Ollier succeeded in obtaining a solid, well-nourished stump with the cicatrix anterior, and, according to the age of the patient, the formation of more or less new bone, there being but three centimeters shortening. Illustrations from skiagraphs and photographs show the results functionally excellent, even where large portions of the tibia and fibula had been subperiosteally removed.

FRACTURES OF THE VERTEBRAL COLUMN AND THEIR TREATMENT.

L. Poller (Von Langenbeck's *Archiv*, 4, iv, 2) has collected a series of thirty-two cases of fracture of the vertebral column occurring during the last five years. Etiology is practically the same in each case, *i. e.*, miners, sitting in squat positions, were doubled up like pocket-knives by falling masses of ore. The majority of these fractures were compression fractures of the lower thoracic and upper lumbar region. In explanation of the various symptoms the author gives in detail the anatomy of the region. One case is mentioned in which priapism was the only symptom, another in which disturbances of the bladder and rectum alone were present. There were also observed disturbances of heart action, fall of temperature to 28 C., and a series of cases in which diabetes mellitus was present.

While it may be possible to exactly locate the injury, its va-

riety, as whether fracture with splinterings or total solution of continuity, cannot often be diagnosed. In cases of total loss of conduction due to compression or to solution of continuity the reflexes are abolished. Gradual increase of the symptoms indicates compression caused by hemorrhage. Treatment consists in the cases of lesser severity in rest in bed with eventually extension by means of Glisson's suspensory, soluble glass corset, electricity, and massage.

In a series of 19 severe cases, 13 terminated fatally, 6 partially or entirely recovered. In the fatal cases death was due to cystitis, incontinence of feces, and their complications. Author differs with those who advise expectant treatment with rest and passive extension. He advocated active treatment by means of forcible extension and manual reposition of the fragments under anesthesia. He claims six cases cured by this treatment. The procedure is simple. Under anesthesia, by means of Glisson's suspensory and counter traction from the legs, pressure is exerted by means of the closed fist over the seat of fracture and a sharp click indicates when the fracture is reduced. Proper position is necessary. This forcible reduction was used in twenty-two cases with no bad result, so that it may be considered free from danger. In recent cases reduction is not advised. Author reports six cases as cured by this method.

URANOPLASTY FOLLOWING EXCISION OF SUPERIOR MAXILLA.

M. Sapiejko (*Revue de chir.*, x, 1897) employs (as also does Bardenheuer) for closing the large defect in the hard palate, following excision of the upper jaw, a triangular flap of mucous membrane taken from the cheek with its base lying at the lower jaw. This is fixed to the round edge in the soft palate, and to the edge of the hard palate by sutures passed through small drill holes. Results were excellent; also, improved eating and talking.

EXPERIMENTAL RESEARCHES IN THE TREATMENT OF HYPERTROPHIED PROSTATE.

L. Casper (*Berliner klinische Wochenschrift*, 97, xxvi) reports the results of his experiments on animals begun two years ago, with reference to the effect of double and single castration, double and single division of the vas deferens and the internal administration of prostatic substance. The animals experimented upon were twenty-one in number; eleven dogs and ten rabbits. The results reached are briefly as follows: Double castration caused atrophy in every case; double division of the vas was followed

by atrophy though occurring more slowly than the atrophy following double castration, but in two cases in which the vasa were divided atrophy did not occur. In three division cases, though kept under observation four months, no atrophy of the testicle was noted. Single castration, single division or excision of the vas, or internal administration of prostatic substance did not produce the least change. Casper does not wish his experiments as thus far conducted to influence in the least the present methods of operating upon man. He does not think that there has been enough experimental evidence brought forward as yet to decide the important point of operation on man. He has operated in this manner (method inferred) in eighteen cases. Patients should be under observation for a considerable length of time before judging of the success or failure of the applied procedure.

CORRESPONDENCE.

GERMAN PHYSICIANS AND NURSES.

BERLIN, February 17, 1898.

The medical faculty here have completely recovered from the fever of excitement into which they were thrown a few weeks ago by the Schenck sex theory. Every one of prominence has had something to say, pro or con, on the subject, as far as the meagre facts at hand would permit, and as no new information has come to the surface, the theme has been abandoned until such time as Dr. Schenck chooses to disclose his secrets to the world. In the matter of being interviewed Professor Schenck has proven himself a master. He has been kind and courteous to all who went to see him and at the same time he has revealed absolutely nothing of importance to his interviewers. The public knows he is at work on an original line of investigation and that is all. News comes from Vienna, however, that his house is still crowded with wealthy but ignorant people, demanding to be treated so that they will beget boys. He says he will not treat any one, no matter what fees they proffer him, until after he has reported his experiments to the medical societies to which he belongs. This, he says will not occur until next December, so that interest in the subject will probably flag until that time.

A rumor has it that a professor here has begun to experiment in the same line, on his own account and after his own ideas.

Rumor does not locate him nor mention his name. The most likely person to my mind to undertake such work is Professor Hertwig, director of the Anatomical-Biological institute of the University. He seemed to think there was something in Dr. Schenck's theory, as he had seen efforts to influence the sex of embryonic animals prove successful.

Aside from this everything has resumed again the even tenor of its way. The clinics are well attended, in fact, some of them are over-crowded. Never before in the history of the University has the matriculation been so large. America is very largely represented. There are students here from all over the United States. With few exceptions they are charmed with the work done here and the profusion of it. Many of them confess that they have never been in New York. They came directly here, and of course they do not know how classically some men operate in New York. I have seen operations done in New York that went far ahead, in point of classical beauty, of anything I have seen here. Then again I have seen men of some reputation in New York do botch work that was called fine operating, which a third assistant here could not do if he tried, blindfolded. In America we have the best and the worst, and they are side by side. In Germany the grading is more even. Only the best achieve prominence; the worst never getting any opportunity to operate or at least be seen at their work.

As to the profusion of material for operation, it is marvelous the amount of operating that is done here. To an analytical observer it would seem as though half, yea, three-fourths of the women of Germany have something wrong with their sexual organs.

But New York is fast coming up in this regard. I doubt not but that the Post-Graduate or the Woman's Hospital has as much material at hand at one time as any one place here in Berlin. But the American metropolis is young and has not the reputation as a medical center as has this capital of Germany. I hope to see the time, however, when medical men from all over Europe will flock to New York for the finishing touches in their chosen profession, as Americans now flock to Berlin.

Of the professors here, one is about on a par with another. Of course I know more about the teachers of gynecology and obstetrics than about the others. Of these probably Martin and Mackenrodt are the most popular. Martin is a hustler and no mistake. I do not say this because he is my uncle. It is an

opinion which I hear constantly expressed. I will not say how many operations he does in one morning for fear the reader will think it is a typographical error. He has peculiar methods which I hope to describe at length in a future paper—one for instance, he sits between the patient's legs in doing a laparotomy. He is without a peer, that I have ever seen, in diagnosis. And yet he does not maul a woman to death in examining her. His touch is light and gentle to an extent that many women after an examination exclaim "Ist dass alles?" having had the expectation that they were to be tortured. It is a great desideratum to a nervous high-strung woman to have a surgeon examine her so dextrously as not to hurt her much. And Dr. Martin has a great many nervous high-strung women among his patients. They are not all dull, stupid, and phlegmatic here in Germany, the popular American opinion to the contrary, notwithstanding. The upper classes, the people of refinement and wealth, to say nothing of the nobility, have finer nervous temperaments than most Americans. The difference is the American's nerves are more frequently out of order, due to a false idea of living—perhaps the eternal rush for wealth and distinction, while the German, living in his quiet leisurely manner, is master of his nerves instead of they being master of him.

But to return from this digression one would not suppose, to glance at Dr. Martin's hands and note their size, that he could be particularly light-handed. Nor would one think that his fat fingers could be very nicely sensitive to touch. But they are, nevertheless, in spite of their enormous size. There is a great deal of endurance contained in that size. He frequently exhausts his assistants and nurses, although he, as the operator, is doing the exhausting work. I have seen him go to work again in the afternoon, with a new batch of assistants, after a long, tiresome siege in the morning and work until seven o'clock. When I was house surgeon at the Woman's Hospital in New York I thought the work was heavy and exhausting on account of the frequency and abundance of the operations, but compared with the work here it was child's play.

Speaking of nurses reminds me of the vast difference between the nurses here and in New York. Whereas, in New York, I think the technical instructions received by nurses, or rather taught to them (whether imbibed or not is a question) is considerably more than they get here, the fact remains, nevertheless, that the nurses here are far superior as nurses to the American

variety. Perhaps the secret of the difference lies in that very fact. The nurse in New York is taught such a quantity that she gets a smattering of everything and a thorough grounding in nothing, and when she gets her diploma she thinks she knows it all, and consequently renders herself dangerous to the physician. Here the nurse is trained like the men in the army to take and execute orders promptly, to the letter, and without question. They never get such a quantity of medcial education that they think they are smarter than the physicians who employ them. They are thoroughly grounded in the practical art of nursing, not in the theory and practice of medicine. When you tell a nurse here to do a thing, you know it will be done and done correctly and you do not have to stop and show her how to do such ordinary things as washing stomachs, irrigating bladders, etc., as I have had to instruct alleged trained nurses in New York. One can place implicit reliance in a nurse here.

But the system of training nurses in NewYork is not incapable of correction. If the instructors there will graft a little of the German thoroughness, practicability, and good horse-sense on their tree of nurse knowledge, they will soon have the finest nurses in the world.

Speaking of the education of nurses leads to the subject of the education of physicians. The time is coming when Germany will recognize an American degree, but it is not yet. American physicians here are not looked upon as doctors, but as students. One cannot practice in the city or the empire without passing the German State examination; and there is small chance of passing that if one has only an American degree.

This discrimination against Americans is not prompted by any jealousy or racial bitterness. Neither is it an exhibition of conceit or vanity. The German is well aware that his education has been better and more thorough—he has spent more time at it —he has passed harder examinations—he has had a finer preliminary education than his American confrère. It is a means of home protection, this ignoring of the American degree.

Although America now is fast approaching the foreign standard of excellence and thoroughness in medical education, it will be some time before the slow-witted Teuton will admit that anything American is as good as the German article, but the quickest way to teach him the supremacy of America, is not to keep sending over here our medical men to study in his schools after they have finished with ours. Give our doctors better facilities and

advantages in our own large cities, like New York and Brooklyn and Boston and Philadelphia; let our professors become famous by original research and experimentation, by clever operating and brilliant diagnosis, and we will not see our students going abroad to finish their education and be snubbed by their German cousins.

In this regard I might say that I consider the Long Island College Hospital peculiarly adapted to become famous if its faculty so wishes. The initiative lies with them. They will have to become more than locally famous in order to attract students to the college, although I hear the matriculation is increasing in size with every year. With the fine new building and apparatus the facilities are there for original work, and it needs only the spirit to move the Long Island College Hospital into prominence as the foremost medical school in the United States.

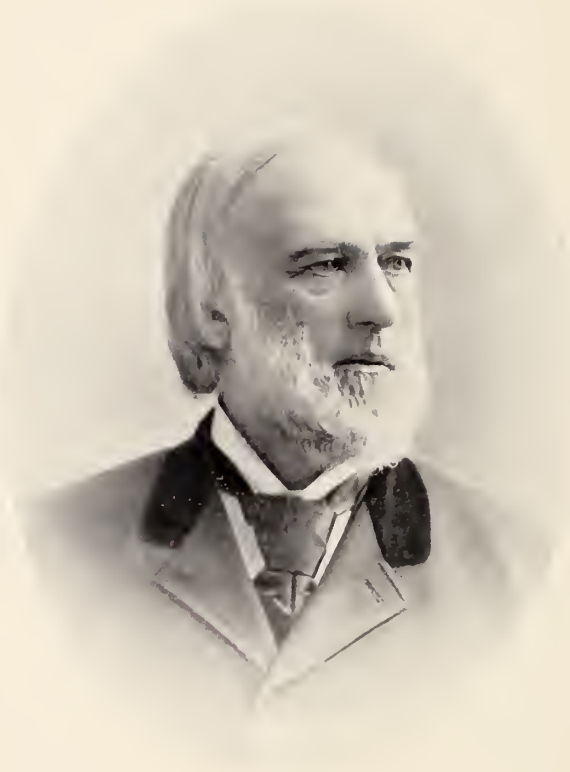
VICTOR NEESEN, M.D.

DISPENSARY BILL.

TO THE EDITOR OF THE BROOKLYN MEDICAL JOURNAL:

The reasons why the Dispensary Bill was drawn so as to give the control of these institutions into the care of the State Board of Charities are briefly these. That the dispensaries in which the worst abuses exist declined, as shown by the replies received by the Joint Committee of New York, to join in any plan to correct these evils. That the State Constitution already places these, like other similar institutions, in the care of the State Board of Charities, but failed to give this board any power to regulate them, except in the case of institutions chartered after July 1, 1896. That these institutions, besides being exempt from taxation, are the recipients of both public and trust funds and are the only institutions so favored which are not under State control. That the State Board of Charities has shown itself like those of Regency and Lunacy capable of controlling the public and private institutions now under its care. That this bill cannot interfere in anyway with those dispensaries whose benefits are bestowed on poor patients, and which are now deprived by those able to pay of both the money and attention which are by right theirs.

The arguments used before the Legislative Committees against the Bill were briefly these: That only one school was represented. That the faults arose from overcrowding of the medical profession and the true remedy was to reduce the numbers of



JOHN TERRY CONKLING, M.D.

doctors. That it was an attempt by physicians to deprive the public of medical help at reasonable rates and thus drive them into their offices and extort exorbitant fees. That the large numbers of patients treated in certain dispensaries arises from the practice of registering each visit as a new patient; but they make no mention of their claiming public moneys on this basis, and also to the large numbers of out-of-town patients for whose treatment the local tax-payers must thus have to pay. That the Bill was never referred to the County Medical Society of New York, when it has been twice thus endorsed and also unanimously endorsed by every regular medical society in the County of Kings.

A. C. Brush, M.D.,
Secretary Joint Committee.

HISTORICAL DEPARTMENT.

JOHN TERRY CONKLING, M.D.

In the death of Dr. Conkling, the Medical Society of the County of Kings loses its oldest ex-President, the profession a bright and noble member of the faculty, and the City of Brooklyn, one of its most honored and useful citizens. He was was born in the historic old town of Smithtown, L. I., March 19, 1825, and died at his home in Brooklyn, March 17, 1898, thus rounding out a useful life of more than the allotted time of three score years and ten.

His preliminary education was received in the schools of his native town, and at the State Normal School at Albany, where he graduated with honor in 1847. Subsequent to this he came to Brooklyn and, if we mistake not, filled the responsible position of principal of one of the public schools.

He began the study of medicine in 1852 in the office of De Witt Clinton Enos, M.D., who subsequently become a distinguished professor in the Long Island College Hospital. Dr. Conkling attended lectures at the College of Physicians and Surgeons during the winters of 1853–4 and 1854–5—graduating the latter year. Well do we recall him as a student at the College. Tall, stately and dignified beyond his years. Always punctual to every engagement, and laboriously industrious in his studies. Every one felt that he was born to succeed. And succeed he did—for the qualities which characterized him as a student, made him a suc-

cess as a practitioner. He began the practice of medicine in Brooklyn in 1855 and so continued till he was disqualified by sickness from seeing the sick any more.

Dr. Conkling was not only a successful physician, but also a useful citizen and filled many very important civil positions.

He was the Brooklyn Superintendent of the Metropolitan Board of Health from 1864 to 1870, and was afterward made President of the Brooklyn Board of Health from 1873 to 1875. From 1864 to 1870, he was a member of the Board of Education. He was a member of the Council of the Long Island College Hospital from 1886 to 1893, Physician to the Brooklyn Dispensary and Eye and Ear Infirmary, and Consulting Physician to the Long Island College Hospital, member of the Long Island Historical Society and a charter member of the Plymouth Church, having been one of the committee which called Rev. Mr. Beecher to that church. He became a member of the Medical Society of the County of Kings in 1859 and so continued until the time of his death. He filled nearly every office in the gift of the Society, from Censor and Orator to President. He was a member of the Physicians' Mutual Aid Association, member of the Brooklyn Medical Book Club and Delegate to the American Medical Association.

He was also a liberal contributor to the medical literature of the day, writing valuable papers on cerebrospinal meningitis, puerperal convulsions, fatty degeneration of the heart, typhoid fever, scarlatina, and diphtheria.

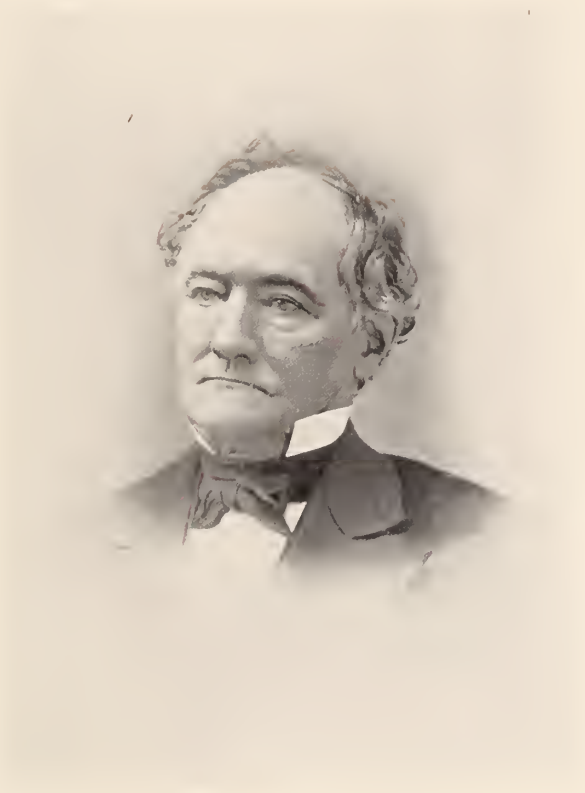
He was married in 1849 to Caroline E. Seaman, who survives him, together with a daughter and son, Dr. Henry Conkling, who promises to be equally distinguished with his father.

Dr. Conkling's funeral took place from his late residence, 143 Remsen street, on the afternoon of March 20th, Rev. Dr. Lyman Abbott officiating.

H. L. B. for Historical Committee.

SAMUEL JOHNSON OSBORN, M.D.

One by one the older physicians who were intimately connected with the early history of the City of Brooklyn are passing away, and in a short time nothing but the record of the past will indicate that they ever existed among us, but such is human nature; it seems that we are here but a short time, and soon all is over, it is for this reason that we record the work accomplished



SAMUEL JOHNSON OSBORN, M.D.

by those of our colleagues who have been active in the work of helping suffering humanity.

The subject of this sketch was born on May 4, 1813, at Mount Airy, Germantown, Penn., and died at Oshkosh, Wis., January 1, 1898.

His grandfather John Osborn, M.D., was born at Sandwich, Mass., in 1713, graduated at Harvard, 1735, his father Joseph Osborn, M.D., who for number of years practised his profession in Middletown, Conn.

His mother, Ann Lent, was a native of New York City.

Samuel J. Osborn, married Miss Jane Ann Zeiss, on September 6, 1836. She was born in 1815 and died in 1852, the result of this marriage were the following children:

Elizabeth Josephine Osborn, wife of Samuel S. Brainerd; Jane Ann Osborn, wife of Frank L. Billings; Kate Osborn, wife of William H. Hay, deceased; James Zeiss Osborn, Cornelia Osborn, Samuel Johnson Osborn, Jr.

His early schooling was attained at the Middletown Academy, Conn., and Joseph Hoxies' School, New York. After completing his education, he entered the drug business where he remained until 1840, when he began the study of medicine in the City of New York, under the preceptorship of Drs. Nicoll H. Dering and Joseph Smith, entering the Medical Department of Rutgers College in 1842, and the New York College of Physicians and Surgeons in 1843, graduating M.D. in 1844. He immediately began the practice of medicine in the City of Brooklyn, where he remained until 1855, removing to Oshkosh, Wis., about this time. Connecting himself with the Medical Society of the County of Kings in 1844, serving the Society as Censor in 1846–50–52–55 and President, 1851.

He was Secretary of the Brooklyn Medical Society from 1845–51.

That the qualities of our distinguished colleague were recognized by the citizens of Oshkosh, Winnebago Co., Wis., is evident from the fact that he was called upon to fill the following positions: Supervisor, School Superintendent, 1859–69, School Commissioner, 1869–71 and Alderman, 1871–72.

That he fulfilled the duties of these various positions with honor and credit, is evident from the opinions advanced by Joseph B. Jones, M.D., of this city, who was associated with him in his early professional life, and who speaks of him, as a physician of more than ordinary attainment, an upright man, and a profound

student of human nature, an honor to his profession, and a man in whom any one could place implicit confidence.

During sixty years of his life he was connected with the Masonic Order, having held the position of Master and High-Priest in his Lodge and Chapter.

WILLIAM SCHROEDER, M. D.,
Secretary of the Historical Committee.

LONG ISLAND ALUMNI ASSOCIATION OF COLUMBIA UNIVERSITY.

The Long Island Alumni Association of the Medical Department of Columbia University celebrated the glories of their Alma Mater, at a dinner given on the evening of the 28th of March at the Montauk Club.

There were some twenty or twenty-five members present. Dr. A. T. Bristow officiated as toast-master.

The menu was under the supervision of the club chef, and was very good. When the physical wants of those present had been attended to, the intellectual part of the evening began.

The first toast of the evening was "Reminiscences," responded to by Dr. Homer L. Bartlett, a graduate of 1855. He gave a brief outline of the early history of the college. Spoke of the Professors who filled the various professional chairs in the old Crosby-street establishment, and of the men of his class who have since become eminent.

"The General Practitioner" was the second toast and was responded to very felicitously by Dr. Henry A. Fairbairn.

Professor John D. Rushmore responded to next toast, "The Professor." He said there were professors and professors, but the true professor was ever at the front of medical progress, and did more to elevate the science of medicine and educate the rank and file than all others combined. To him we owe the high standard of modern medical education and the better facilities for acquiring it.

"The Surgeon" was assigned to Dr. H. Beekman Delatour, who descanted on the superiority of modern surgery, over that of the past, and dwelt particularly on the improvements suggested by Lister and his school, and the blessings of chloroform and ether. Dr. Alderton spoke for the "Specialist," Dr. Warbasse for "The Pathologist," and Dr. Hunt was called on for an impromptu

speech on "The Antiquary" which he did in a very happy manner.

All the members present expressed themselves as well pleased, and hoped the annual dinner of the Brooklyn Alumni of the P. and S. might be kept up.

H. L. B. for Historical Committee.

GIFT TO DISPENSARY.

As an item of news which will interest the medical profession in particular, as well as the public in general, is the announcement that the wealthy Eastern-District merchant, Mr. Henry Batterman, has given the sum of $25,000 to the East Brooklyn Dispensary, as a memorial to his daughter. What a precious legacy! What a fitting memorial!

"He that hath pity upon the poor, lendeth to the Lord."

NEW BOOKS AND BOOK NOTICES.

All books received by the Journal *are deposited permanently in the Library of the Medical Society of the County of Kings.*

The Diseases of Women. A Handbook for Students and Practitioners. By J. Bland Sutton, F.R.C.S. (Eng.); and Arthur E. Giles, M.D., B.Sc. (London); F.R.C.S. (Edin). With illustrations. Philadelphia: W. B. Saunders, 925 Walnut street; 1897.

While the wise man's words remain true that "of making many books there is no end," there is no legitimate reason why books like this should not be made. The name of Bland Sutton is one very familiar to the American profession and naturally a new work from this gifted author, aided by a gentleman not unknown to fame, would be received here with favorable anticipations. If two words were to be used indicating the character of the work, they would be conciseness and compactness. The nomenclature smacks somewhat of the past and is not abreast of the scientific trend of the book. As a whole, the book gives a clear and succinct idea of modern gynecology, and for ready reference of the practitioner and a guide to learners, will hold its place with others of more pretentious appearance.

As might be expected, the sentiments reflect the well-known view of its senior author on matters relating to disease of the ovaries.

That portion of the text relating to ectopic gestation is replete with sound maxims and conservatively sound in its teachings.

The statement in this connection that "a healthy Fallopian tube is more likely to become gravid than one which has been inflamed" has already

challenged criticism. Few works of English authors come so near to the American standard of strict antisepsis in all that goes to make the ideal operation.

WALTER B. CHASE.

ARSENAURO AND MERCAURO. Clinical Records as reported in Medical Journals. Charles Roome Parmele Company, 92 William street, New York.

In this pamphlet of thirty-two pages is included a mass of testimony as to the value of arsenauro and mercauro, and the method of their use, taken from the prominent medical journals of the United States, among them being the *New York Medical Journal*, *Medical World*, *Medical Standard*, *Journal of the American Medical Association*, *New England Medical Monthly*, *New York Polyclinic*, and others. The contributors of these articles are Professor T. H. Stucky of Louisville, Ky., whose paper is illustrated with cuts, showing the influence of arsenauro in increasing the number, size, and quality of the red blood-corpuscles; Professor Lydston of Chicago, Professor Ohmann Dumesnil of St. Louis, Professor Wight of Brooklyn, and others. The diseases which these clinicians have treated with the remedies are various and numerous, and the results which have accrued are remarkable.

THE YEAR-BOOK OF TREATMENT FOR 1898. Philadelphia and New York: Lea Brothers & Co. Pp. 484. Price, $1.50.

This is the fourteenth annual issue of the "Year-Book," and the object of its editor "to present the busy practitioner with a readable digest of the progress made in the domain of therapeutics during the past year," has been well and thoroughly accomplished. The only changes in the staff of contributors are that Dr. G. A. Gibson, Lecturer in the Edinburgh School of Medicine, has had charge of the section dealing with "Diseases of the Heart and Circulation," and Dr. H. P. Hankins, Physician to St. Thomas' Hospital, deals with "Diseases of the Stomach, Intestines, and Liver."

It is impossible in a brief review to do more than call attention to this admirable résumé of what has been accomplished in a twelve-month. The long experience which its contributors have had in the art of observation, selection, and condensation makes this publication more and more valuable each year.

STIRPICULTURE, OR THE IMPROVEMENT OF OFFSPRING THROUGH WISER GENERATION. By M. L. Holbrook, M.D. 12mo; pp. 192. New York: M. L. Holbrook & Co.; 1897.

Plato and Aristotle, Lycurgus and Plutarch, Darwin and Huxley, Brown-Séquard and Kraft-Ebing; these are surely names to conjure with. These, and many others equally famous, appear on the pages of this little volume, and their teachings, laws, observations, and experiments are used as a basis upon which the author endeavors to build a structure that shall stand as a landmark for all those who are honest in their endeavor to improve the human race.

Prenatal culture, heredity, education, evolution, and the germ-plasm are the principal topics considered.

As the extensive researches of the author, well arranged, well written,

and containing many and varied items of interest, pass before the eye of the reader, the question at once arises: "To what conclusion does all this lead?" Something, surely, of practical value should be the result, but the book, in this respect, is a disappointment. That every child born is an experiment, and that it is better to have fewer and better children, are statements that are axiomatic. The manner in which better offspring can be secured is as indeterminate as before the book was written.

The closing chapter on "A Theoretical Baby" is the only one of practical value in the book. It is a personal application of the teachings found in any standard work on obstetrics, and could be read with profit by many physicians, as well as the laity.

Altogether, the book is as odd as its name. For those who take pleasure in "glittering generalities" and in curious illustrations of an abstract idea, gathered from the four quarters of the globe, the book has a value; by others, it is best left unread. HENRY P. DE FOREST.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY. Being a Yearly Digest of Scientific Progress and Authoritative Opinion in All Branches of Medicine and Surgery, Drawn from Journals, Monographs, and Text-books of the Leading American and Foreign Authors and Investigators, Collected and Arranged with Critical Editorial Comments, under the General Editorial Charge of George M. Gould, M.D., and a Staff of Associate Editors. Royal octavo; pp. 1257. Illustrated. W. B. Saunders, 925 Walnut street, Philadelphia; 1898.

Again it is our pleasure to direct the attention of our readers to the Year-Book, which has now been issued for the third time under the able editorial supervision of Dr. Gould. As in former years, the volume aims to give the profession an epitome of the world's medical progress during the previous year, and, as before, this comprehensive endeavor has been successful.

Some changes have been made in the editorial staff during the year, but the editor-in-chief is still fortunate in having as his associates men who are prominent in the medical world, and who have ably seconded their chief in his editorial work.

Not only are the so-called "major subjects" of medicine and surgery well reviewed, but the more or less specialized departments of pediatric psychiatry, orthopedics, ophthalmology, laryngology, dermatology, and medico-legal jurisprudence are amply represented.

Each associate has, in his own department, given a comprehensive synopsis of the year's progress, and noted such discoveries or inventions as seem to be of permanent value, and while there is none that are as striking in value as the Widal test for typhoid fever, in the department of internal medicine, still each subject has more or less important contributions to be recorded.

The book is a continual surprise to the reader because of the amount, value, and accuracy of the information which it contains, and while somewhat disappointing if it be regarded as the fountain-head of all medical knowledge, it is eminently satisfactory if it be regarded as the ocean into which many streams of knowledge are tributary, any one of which, by means of the

ample index and adequate references, may be traced to its source and there details found which it is impossible to preserve in the homogeneous volume.

HENRY P. DE FOREST.

A MANUAL OF ORTHOPEDIC SURGERY. By James E. Moore, M.D., Professor of Orthopedics and Adjunct Professor of Clinical Surgery, University of Minnesota, College of Medicine and Surgery. Octavo volume; pp. 356. Illustrated. Philadelphia: W. B. Saunders. Cloth, $2.50 net.

Dr. Moore emphasizes the fact that to successfully treat deformities resulting from diseases of the joints, an early diagnosis is essential. He calls attention to a lack of familiarity with methods of diagnosis shown by practitioners of general medicine, to whom the afflicted first appeal, and to the ignorance of treatment, other than operative, shown by the general surgeons to whom the victims are subsequently sent. He predicts that the day is not far distant when no medical faculty will be considered complete without a special chair of orthopedic surgery, and when this branch of surgery will be as deserving and as well recognized as ophthalmology is at the present time.

Unfortunately, his criticisms are just, and undoubtedly the literature of orthopedics is so prolix as to be beyond the reach of the student unaided by the skilled teacher, and of the busy doctor, who has not had the benefit of special instruction.

This volume will satisfy a demand long felt. The author has presented diagnostic points clearly and has made the application of rational treatment easy by giving the reader the benefit of his individual experience. The book is serviceable, also, in that it contains many suggestions which, though eminently practical, have possibly been considered too homely to gain admission to the pages of works aspiring to the dignity of treatises.

The diction is clear and concise, and the illustrations are well selected.

Nothing need be said commendatory of the mechanical features of the book other than to call attention to the name of the publisher.

WILLIAM W. BROWNING.

THE PSYCHOLOGY OF SUGGESTION. By Boris Sidis, M.A., Ph.D. New York: D. Appleton & Co.; 1898.

This is a treatise on hypnotism, after the French school, especially that of Nancy. The first part is on suggestion; the second, an explanation of the same through the domination of the subconscious state over the conscious, as exemplified, also, in hysteria, double personality, and insanity, especially paranoia; and, in the third part, as this condition dominates crowds instead of only individuals in what are termed "mental epidemics."

What little is said about the physiology and pathology of the nervous system is up to date, thanks to Dr. Van Giesen; but there is a good deal about what is termed, and he calls, "hysteria," and very little about what is termed "will-power."

A CLINICAL TEXT-BOOK OF SURGICAL DIAGNOSIS AND TREATMENT FOR PRACTITIONERS AND STUDENTS OF SURGERY AND MEDICINE. By J. W. Macdonald, M.D., Professor of Surgery and of Clinical

Surgery in Hamlin University, Minneapolis, etc. With 328 illustrations. Philadelphia: W. B. Saunders; 1898.

The faults of the book before us are comparatively few, and these of a character that would seem to render an adverse criticism based upon them alone the merest pedantry. Still, good medical book-making demands uniformity in style and expression and the avoidance of unnecessary verbiage. Interrogatory sentences serve not so good a purpose as plain statements of facts, and sudden changes from a severely didatic method to that of a very informal "chat," although they may relieve the tediousness of description, rob the book of those qualities which go a long way toward giving it decided character, and serve no really useful purpose.

What the author lacks in uniformity of method and style, as well as good form in the presentation of the subject-matter of his treatise, he has certainly compensated for in both the quantity and quality of the material offered. He has performed well his task of compiling and placing before the busy practitioner such knowledge as will be best suited to his needs in the every-day care of surgical cases.

While no member of our profession can afford to ignore the study of the principles of surgery, or of surgical pathology and bacteriology, yet, in a surgical emergency he is more frequently brought face to face with the demand for practical knowledge that shall enable him to make a rapid and accurate diagnosis, and assist him in formulating, in the shortest possible time, a proper line of treatment; than with questions relating to the wandering connective-tissue cells, the formation of the vascular loops of Arnold, the rôle played by the colorless corpuscles in an inflammatory suppurative process, or the methods of invasion and propagation of microbic infectious agents. While these have their charms for the true student, and knowledge derived from investigation of facts connected therewith is always of inestimable value, since it forms the foundation for our art, yet the search for practical "points" for guidance in active practice always has created, and always will create a demand for books of the class before us.

The in-the-main practical methods of examination, which the author teaches, and the generally up-to-date classification and treatment of surgical diseases and injuries presented, combine to make the book a desirable one for the practitioner to possess. But it is not a book for the library shelf. It is a book for the office desk; for the dining-table; for a hasty glance during the hurriedly swallowed meal with which the doctor cuts short his own life in the attempt to lengthen some one's else; for a carriage-companion on a long ride. It is a pity it is not a pocket vade mecum.

George Ryerson Fowler.

A System of Practical Medicine. By American Authors. Edited by Alfred Lee Loomis, M.D., late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M.D., Professor of Medicine in the New York University. Vol. III.—Diseases of the Alimentary Canal, Peritoneum, Liver and Gall-bladder, Spleen, Pancreas and Thyroid Gland, Chronic Metal Poisoning, Alcoholism, Morphinism, Infectious Diseases Common to Man and Ani-

mals, Miscellaneous Subjects. For sale by subscription. Per volume, cloth, $5.00; leather, $6.90; half morocco, $7.00. Philadelphia and New York: Lea Brothers & Co., Publishers; 1898.

We have examined this volume with interest. It is up to date. The gentlemen who have written the articles are to be congratulated on the thoroughness of their work. A system such as this is gives us the views of men we would not otherwise hear from, possibly, in treatise form. That is an advantage. Its moderate price will bring it within the reach of many. To the youth just launching out it will form a valuable part of a library.

It is a difficult matter to review such a volume. The field it covers is very large. We propose to touch on a few points only. As a whole, the volume is one to be proud of and one that will be frequently referred to.

In the article on appendicitis we find the following: "It is the physicians and surgeons who take middle ground in the treatment of appendicitis to whom we must look to save every patient from being subjected to a serious operation on the one hand, and on the other to prevent those who should be operated upon from being allowed to die without timely surgical aid. An extremist is seldom right on any subject. With a better knowledge of the etiology. pathology, and clinical history, and the addition of some experience and common sense, it would seem that appendicitis will in the near future be treated as rationally as any other disease." True, my friend! the last sentence true, especially. But have you not seen cases operated on by your so-called extremist when you stood by and objected in your heart because the symptoms were so mild as to suggest no such extreme procedure? Have you not seen the extremist remove from such a patient a gangrenous appendix on the point of rupture? On the other hand, has not such a case as this come under your observation? Pain in the region of appendix, slight temperature, some disturbance of the function of the bowel, the patient left, on a morning or evening visit. with the assurance that all would be well, when a quick messenger has summoned you back to the bedside to find sudden agonizing pain. collapse, etc. What has the extremist remarked when he has come to your aid? Well, no doubt, you and he have gone down into the parlor and have had a love-feast, and have agreed that some of these cases are beyond our ken. and that misfortune is a great arbitrator between extremists, and you have summoned the family and told them so. Or, in other words, it is not well in these cases to tell this to the family first, and let them take part in the "gamble," for it is a veritable gamble in many cases to decide what to do. and the quicker we make a clean confession of it the better. The surgeon and the physician will never be omniscient, and the appendix, like some other bothersome organs of the human being, bids fair to keep them reminded of that fact. Inspection appears to be the only sure means of diagnosis in some cases. The perfection of electric illumination may, in the future, make ocular examination possible without surgical interference.

We must characterize one statement as decidedly extreme. It is this: "It is much to be regretted that the abdominal cavity is constantly being invaded by those who have neither experience nor training in such work; in consequence thereof valuable lives are frequently sacrificed." That statement may be applied to a portion of the Pacific Coast. We are sure it is a

very small portion. We know no other section to which it could be applied. Such a statement is unworthy of a place in a scientific book.

In the article on acute peritonitis we are rather surprised to see the following statement: "In those cases where we can discern no exciting cause which can be removed or benefited by surgical interference, our therapeutics to-day is identical with that which received its highest recommendation from Alonzo Clark." There is a decided difference of opinion on that question and we are disposed to think that the weight of opinion is against Alonzo Clark's procedure.

In the article on diseases of the liver we see no mention made of acute hepatitis.

In the article on diseases of the spleen we are told that "Palpation is by far the most valuable method of examination, because the results obtained by it are much more certain than is the case with percussion." Auscultatory percussion in examining this organ, as in the heart, has proved very valuable. We would place it before palpation.

The last article on insolation is excellent. It occupies a deserved place in a work of this character, compiled for ready reference. It comes from one of large experience with the condition. It is concise.

ESSENTIALS OF BACTERIOLOGY. By M. V. Ball, M.D., Bacteriologist to St. Agnes' Hospital, Philadelphia. Third edition, revised, with illustrations, some in colors, and five plates. Philadelphia: W. B. Saunders; 1897. Pp. 218. Price, $1.00.

This work is intended, according to the title, for "students and practitioners," presumably of medicine.

It would seem that, in view of the great advances made of late in purely medical bacteriology, the very limited space devoted to the subject might better have been utilized in the description of those bacteria which alone interest the medical man. Instead of this, a large amount of the volume is devoted to the consideration of non-pathogenic and other organisms, which interest only those engaged in the study of general bacteriology. The subject of general bacteriology, even its "essentials," is obviously of too great a range to be condensed into a work of so small a volume, and if any criticism is to be made of the work, it is that an attempt has been made to include too much in too small a space, and so to impair the usefulness of the whole.

E. H. WILSON.

CLINICAL METHODS. Being an Introduction to the Practical Study of Medicine. By Robert Hutchison, M.D., M.R.C.P., Demonstrator of Physiology in London Hospital Medical College, and Harry Rainy, F.R.C.P., F.R.S.E., University Tutor in Clinical Medicine, Royal Infirmary, Edinburgh. 562 pages, 137 engravings, and 8 colored plates. Cloth, $3. Philadelphia and New York: Lea Bros. & Co., Publishers.

Perhaps we can in no better way convey to our readers just what ground this book covers than by quoting the opening of the preface. Says the author: "The title, 'Clinical Methods,' probable describes the scope of this book better

than any other. It is not intended as a treatise on medical diagnosis. On that subject there is already a sufficiency of good works in existence. It aims rather at describing those methods of clinical investigation by the proper application of which a correct diagnosis can alone be aimed at. To every student when he first begins work in a medical ward the question presents itself: 'How shall I investigate this case?' To that question the present work is intended to provide an answer." The first chapter describes the methods recommended in case-taking, and includes a general scheme for the investigation of medical cases. Then follow chapters on General Condition and Appearances; Alimentary System and Abdomen; Circulatory System; Clinical Examination of the Blood; Respiratory System; Urine; Skin; Nervous System; Examination of the Eye, Ear, Throat, and Nose; Locomotory System; Clinical Examination of Children; Examination of Pathological Fluids; and Clinical Bacteriology.

The book is thoroughly up to date, and those who desire descriptions of the latest clinical methods, such, for instance, as Widal's test, will here find all the details concisely and accurately described. As a whole, the volume is a valuable contribution to medical literature and no clinician can afford to be without it.

Sexual Neurasthenia (Nervous Exhaustion); Its Hygiene, Causes, Symptoms, and Treatment. By George M. Beard, A.M., M.D. Edited, with notes and additions, by A. D. Rockwell, A.M., M.D. Fifth edition, with formulas. New York: E. B. Treat & Co.; 1898. Pp. 308. Price, $2.

The most important addition which we find in this edition, as compared with those that have preceded, is a method of treatment of obstinate cases which the editor calls the "depolarizing method." In employing the galvanic current it is necessary for the relief of pain to throw the neutral point outside the diseased area, subjecting the painful part to the action solely of the anode or positive pole; the same result would not be obtained if the electrodes were applied in close proximity to each other. By the use of the ordinary electrode it is not possible to completely eliminate an undesirable polar effect. To accomplish this the editor has devised a new electrode, with which he has had success, and the construction and use of which he fully describes. This he calls a depolarizing electrode.

Practical Therapeutics for January, 1898. No. 1, vol. I.

Under this title H. K. Mulford Company of Philadelphia began in January a publication, the prime object of which is to present the salient features of those movements in the direction of progress in medicine and therapeutics which have a direct bearing upon the daily work of the general practitioner. While it is to a certain extent a trade journal, it is promised that it will always stand as an exponent of ethical, scientific medicine, unalterably opposed to anything which savors of quackery, charlatanism, or secrecy of pharmaceutical preparation.

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

ENTERED AT BROOKLYN, N. Y. POST OFFICE AS SECOND CLASS MATTER.

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VOL. XII. No. 6. WHOLE No. 126. | BROOKLYN, N. Y., JUNE, 1898. | Single copies 25 cents $2 a year, in advance

ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

ORCHIDECTOMY AND VASECTOMY, FOR THE RELIEF OF SYMPTOMS DUE TO HYPERTROPHIED PROSTATE, WITH REPORT OF CASES.

BY JAMES MACFARLANE WINFIELD, M.D.

Read before the Medical Society of the County of Kings, December 21, 1897.

It is with considerable hesitancy that I present for your discussion a paper on the above subject; for during the last three years so much has been written that more from this source would seem almost superfluous; but the opportunity afforded me for study by the genito-urinary wards of Kings County Hospital, and the excellent results obtained from orchidectomy and vasectomy warrant the making of this report.

The subject of enlarged prostate, and the chain of symptoms accompanying it, have engaged the attention of physicians and surgeons from the earliest age of medicine; for every practitioner is sooner or later called upon to prescribe for the relief of bladder symptoms arising from senile or other prostatic hypertrophies. Before the advent of anesthetics and antiseptic surgery, measures for relief were mainly palliative, and early in the course of the

disease the patients were introduced into catheter life. These, of course, did not cure, and at the best afforded only temporary help; and far too often the means for relief became the instrument of death. The frequent lack of cleanliness made the catheter the medium of infection, a septic condition quickly intervened, and the inevitable results followed.

When it became possible to do grave surgical operations in a painless and cleanly manner, the minds of the genito-urinary surgeons were at once directed to the prostate, and as a result prostatotomy, or prostatectomy, etc., were devised. The results, however, were far from favorable; these grave operations cured only a small percentage, partial relief was obtained in a few, and the mortality was high. For this serious procedure was not resorted to until the patient had become almost helpless from bladder or renal complications.

Removal of, or operations about the prostate by any method are not easy of accomplishment; consequently, surgeons were anxious for some simple and fully as successful means of procedure.

In 1893 Dr. J. William White of Philadelphia read a paper before the American Surgical Society (*Annals of Surgery*, 1893) bringing forward his theories regarding the etiology of prostatic enlargement, and methods for its relief by removal of the testes.

In reference to the analogy between the prostate and the uterus, White says (White and Martin's work on "Genito-Urinary and Venereal Diseases," 1897): "The prostate is the analogue of the sinus genitalis in the female—the uterus and vaginal cavities—the structure of the prostate and uterus are strikingly similar. The histories of hypertrophic growths as well as general hypertrophy of both organs are similar. These disturbances occur at about the same time in the sexual life of both sexes, during the latter half of the reproductive period. This analogy is discredited by embryologists, still the clinical resemblance between the two forms of overgrowth are none the less striking, and the results of castration in such cases (that is, hypertrophied uterus and prostate) are equally similar and remarkable in each sex." This, in brief, is the theory that led to the operation of orchidectomy.

The correctness of Dr. White's reasoning has been attested by hundreds of careful observers throughout the world, and the results have proven the operation to be of great benefit.

How and why removal of the testicles or portions of the vas should reduce the size of the prostate is still an unsettled ques-

tion, and many and ingenious are the theories advanced. One that seems very tenable is that the testicles and cord (especially the vas itself) is abundantly supplied with sympathetic nerve filaments. Sympathetic reflexes to the prostate are interfered with by cutting the cord or removing the testicles. The nutrition and innervation of the gland are interrupted and the result is atrophy.

This theory seems borne out by the results obtained when a unilateral orchidectomy or vasectomy produces atrophy of the prostate on the corresponding side; still, like all theories, it must await confirmation by further study.

My experience with castration is limited to three cases, where the operation was done for the amelioration of symptoms arising from enlarged prostate, and to one other where a testicle was removed for tubercular disease.

The first operation was done in conjunction with the late Dr. Henry W. Rand and he reported it in a paper read before the Brooklyn Surgical Society, and published in the *Annals of Surgery*, August, 1895. Since I am in possession of the original notes and have had opportunity for subsequent observation of the patient, I have taken the liberty of listing this case with those strictly my own.

Case I.—Double orchidectomy. J. S., aged fifty-eight; appears much older; difficulty in urination for ten or twelve years; for the last two years has had dribbling (incontinence of retention).

Examination per rectum showed the lateral lobes of the prostate to be moderately enlarged, the isthmus (middle lobe) considerably.

The urethra was eight and one-half inches long. Complete emptying of the bladder could only be accomplished by catheterization.

The day before the operation the residual urine was twelve and a half ounces. Castration was done February, 1895. Two days after the patient passed twelve ounces of urine voluntarily, and in a fair-sized stream. His condition continued to improve; residual urine absent; prostate diminished in size. At the end of three months the urethra had shrunken one inch, and a sound could be easily introduced into the bladder. Intervals between urination considerably lengthened; before the operation they were from every half to three-quarters of an hour, now the bladder retained the urine two, three, or four hours. Repeated examinations of the patient during the past three years proved the

operation to have been a complete success. There is no residual urine, vesical and bladder irritation absent, and the gland completely atrophied. The bladder is emptied every five hours during the day and once at night. This case can certainly be classed among the successful ones.

Case II.—Double orchidectomy. M., aged sixty-six. According to his history for fifteen years has had more or less "bladder trouble," consisting of frequent micturition which had grown more urgent during the past five years, so that the bladder had to be emptied every twenty minutes; there was also considerable dribbling. Three times during the past two years acute retention occurred, making catheterization necessary. The prostate was uniformly enlarged to about the size of a small orange. Urethra nine inches long. Residual urine about four ounces, which contained pus, prostatic shreds, and epithelium. The kidneys were as healthy, apparently, as they usually are in a man of his age. The patient readily consented to orchidectomy. Four days succeeding the operation the bladder was emptied by catheter. On the fifth day he urinated voluntarily. On the sixth day residual urine decreased one half (two ounces). The prostate seemed softer and slightly smaller. One month later the gland had lessened in size; no residual urine, and micturition every two hours. The patient has been seen once since leaving the hospital; eight months after the operation his condition was good, able to hold water for four hours night and day. Prostate about the size of a large hickory-nut.

Case III.—J., aged sixty-two. Prostate greatly enlarged; for two months unable to urinate without the aid of a catheter; general condition poor. Double castration was done after two weeks of preliminary treatment, consisting of vesical irrigation. Ten days after the operation the cystitis was less severe; micturition became less frequent; the prostate had become smaller, due, undoubtedly, to the lessening of congestion from the operation and lavage. One month later the patient had a slight rise of temperature and became delirious. After a few days the temperature was normal, and the patient lapsed into a condition of senile dementia; the good results from the operation continued, for there was no dribbling, no frequent urination, and the prostate was considerably smaller. It is not probable that the mental condition of this patient had any connection with the operation, but rather was the result of the previous general debility.

Case IV. is one of especial interest, for in this unilateral orchi-

dectomy was done for a tubercular testicle and cord. The patient was forty-eight years old; admitted to Kings County Hospital suffering from a fungating and sloughing tubercular tumor of the right scrotum and testis. The prostate was enlarged and nodular, especially on the side corresponding to the diseased testicle. The patient was in a wretched condition from the vesical pain and frequent calls to urinate. The diseased testicle and cord were removed; the bladder frequently irrigated for the existing cystitis. He made a favorable recovery from the operation; his bladder symptoms became less troublesome; he was able to hold his water from three to five hours. Examination of the prostate showed that it had diminished in size, especially on the side castrated.

The patient remained in excellent condition for a year; he gained in weight and strength, and during the interval was almost entirely free from symptoms; eventually, however, he began to show signs of general tuberculosis, and died about two years after the operation. Autopsy revealed extensive tubercular deposits in the bladder, prostate, and lungs.

Dr. Rand, in the article above mentioned, gives the history of a similar tubercular case. Levings of Milwaukee (*Medical News*, August 17, 1895) also reports one. There is also another report by a foreign observer, but, unfortunately, the notes have been mislaid. These seem to show that removal of the testicle has a modifying effect on prostatic enlargement from tubercular as well as fibrous overgrowths.

It might be of interest to note whether this operation would be beneficial in cancerous degenerations of this organ.

(In speaking of this to my friend, Dr. Calvin F. Barber of Brooklyn, he related the history of a case of cancer of the prostate occurring in his practice. The patient, who was over sixty years of age, had been troubled for five or six years with symptoms referable to the bladder and prostate; nothing in the way of palliation seemed to have any effect. Finally, the doctor removed the testicles. Immediately following the operation all untoward symptoms improved. The pain, which had been very severe, entirely disappeared. Intervals between urination considerably lengthened. All other symptoms, either general or local, improved. Eventually, however, the patient succumbed to the cancerous disease. Although cancer in this location is of slow growth, still, the operation in this case had a modifying and retarding effect on the growth, and it certainly did relieve all pain

and discomfort, and the general condition improved. The autopsy verified the diagnosis of cancer.)

In the discussion following Dr. White's early paper, Dr. Mears raised the question if the same effect on the nutrition of the prostate could not be procured by exsection of the vas deferens. This led to experiments upon dogs, and it was found that the prostate lost in weight after the ligation and severing of the vas, although the testicles did not appear to atrophy. As a result of these experiments many surgeons modified the operation as proposed and practised by White, and soon the medical journals were filled with reports of their cases. Many of these were favorable, especially those of Mr. Reginald Harrison of London, who reports over fifty per cent. of absolute cures, and benefit in nearly all of those in which the vas was exsected.

There are many things about vasectomy to recommend it. It does not emasculate the man, the testicles are not removed, and their atrophy takes place so gradually that it is practically unnoticed. If the man be young, that is, between forty-five and fifty-five, and retain his virile powers, we can do this operation and venture to assure him that it will only in a certain degree modify his sexual ability; of course, the reproductive possibility will be wanting, but desire and gratification may remain.

Further, the operation is not a severe one, and can be safely and painlessly done with local anesthesia. These considerations, and the difficulty of obtaining the patient's consent to castration, along with the favorable reports of many observers, led me to adopt this operation wherever it was practicable. I am able to add seven cases to those already reported. Six of them are cured of all bladder symptoms, and the patients are, apparently, enjoying perfect health. The other case died about three weeks after the operation, the cause being nephritis.

Case I.—Double vasectomy. J. S., aged sixty. Prostate size of a tennis-ball; for five years he was troubled with frequent urination; residual urine five and one-half ounces. Operation, September, 1896. Prostate began to diminish in size, and two weeks later the residual urine was three ounces; catheterization necessary three times in twenty-four hours. No change in the testicles. One month after the operation all symptoms improved; prostate diminished in size, residual urine down to two ounces and voided every two hours, showing that the bladder had begun to gain its tone. Three months later all abnormal symptoms absent; patient feeling well, and as he expressed himself, "like a boy;" stream

of urine full and forcible, no residual; prostate less than half its former size; testicles slightly smaller. "More sexual desire than for five years previous." (The last sentence is quoted literally.)

Case II.—Double vasectomy. H., aged fifty-five. Private patient. Symptoms of hypertrophied prostate for three years; gland enlarged to the size of an egg. In my judgment the symptoms were not severe enough to warrant an operation, and only at the urgent demand of the patient it was performed. Within month all urinary symptoms had subsided; prostate began to show signs of atrophy. Fourteen months later the patient was practically well. Prostate shrunken to the size of a marble; testicles are softer, and, I think, smaller, although the patient says not.

Case III.—J. L., aged fifty-eight. Exsection of the right vas and ligation of the left. Frequent urination, every hour night and day; occasional resort to catheter; urine ammoniacal, residual six ounces; prostate enlarged in all its dimensions, especially the central and middle portions—it was possibly as large as a good-sized orange. Operation, October 16, 1896. Urine voided voluntarily from the first. Intervals from one to one and a half hours. October 25th, nine days after the operation, acute retention occurred, necessitating catheterization; fourteen ounces were withdrawn. After this the patient continued to improve; intervals between urination lengthened to three or four hours; prostate softer and somewhat smaller; testicles appeared smaller. He was discharged from hospital but readmitted November 20, 1897, for a varicose ulcer, thirteen months after the operation. The prostate and bladder were examined. Right testicle considerably atrophied; prostate smaller, especially the right side; intervals between urination four to five hours, stream good size and forcible. Patient says his virile powers are good.

Case IV.—J. G., aged seventy. Condition bad; prostate large; catheter life began five years ago; all symptoms unfavorable to vasectomy, but as he would not submit to a more radical operation exsection of the vas was done March, 1897. On the third day he passed four ounces of water voluntarily; fourth day, attempted but failed; fifth, succeeded (five ounces); each succeeding day urine voided voluntarily and in increasing quantities. Two months later all untoward symptoms improved; prostate slightly smaller. Patient was lost sight of shortly after.

Case V.—Private patient, aged sixty-five. All the symptoms of advanced prostatic disturbance; gland greatly enlarged; gen

eral condition bad. Vasectomy, May, 1897; improvement great while in bed; after convalescence the symptoms reappeared with almost the same severity as before the operation. Six weeks later improvement was noted. Urine voided at longer intervals. Two months after the operation all symptoms improved. At the time of writing, December 1st, eight months later, the patient expressed himself as being well, and greatly pleased with the result. Prostate is smaller; urination every four hours during the day, twice during the night; testicles atrophied.

Case VI.—W. E., aged fifty-six. Patient a dissipated, run-down tramp; all the symptoms of the most severe type; prostate as large as a fist. Operation, double vasectomy, none other being allowed. Urine voided voluntarily every half hour; residual urine, which had been eight ounces, reduced to three. Later the intervals between urination lengthened to one and a half hours. Patient's condition continued to improve until about three weeks after the operation, when he sank into coma and died. Autopsy revealed extensive renal changes.

Case VII.—M. D., aged sixty-two years. Double vasectomy, November 6, 1897. Patient in a splendid physical condition; first noticed bladder symptoms about five years ago; urination every hour and a half; prostate the size of a hen's egg. The day after the operation the urine was voided at intervals of two to three hours; prostate slightly diminished in size in ten days; improvement continued uninterruptedly. The case is of too recent date to predict ultimate results.

Many and severe have been the criticisms of both orchidectomy and vasectomy; some surgeons of international reputation deem it criminal to remove the testicles unless they be diseased; and again, men skilled in prostatic surgery naturally denounce such simple operations. Originators of special processes (as Bottini's) generally prefer doing their own pet operations. Nevertheless, every man is not able, through lack of skill or circumstances, to do the grave or special operation, but he can do either of these under discussion. Another argument against White's operation (orchidectomy) is that many will do irreparable damage in unnecessarily removing physiological organs. This argument is easily combated, for although many ovaries were unnecessarily removed for fibrous degeneration of the uterus, still, oophorectomy is now recognized as the proper operation under certain circumstances. The same will occur with this operation, for the good common sense of the medical profession will

put a check on the over-zealous and sometimes dangerous surgical attempts.

In making a comparison of the two operations it might be said that if all things were equal orchidectomy would be by far the better procedure, but the objections to it are serious and have considerable foundation in fact. It is extremely difficult to get men, be they ever so old, to submit to emasculation; and when they do consent they are so worn out from disease and distress that they are the worst possible subjects for operations. Consequently the risks are almost as great as they are when the surgery is applied directly to the prostate.

In castration general anesthesia is necessary; this again adds to the risk. In vasectomy we do not, apparently, emasculate the man; his consent is readily obtained, although he is warned that his sexual powers may be greatly abated, but, as a rule, he is willing to sacrifice that, providing his condition can be improved, and he does not visibly lose any of his anatomy.

This operation is simple, local anesthetics are all that are required; convalescence is short, and patients can be allowed to sit up on the third day.

Although there are many adverse opinions regarding this operation a sufficient number of successful cases are recorded by good and careful observers to make advisable a thorough trial of this simple procedure for the relief of one of the most distressing complaints with which we have to deal.

DISCUSSION.

Dr. L. S. Pilcher: Castration for the relief of prostatic obstruction is an operation that has been before us now for a number of years. Since the condition for which it is done is one that comes under the observation of every practitioner, doubtless already in the aggregate, in a considerable number of cases, there must have been experience accumulated. I should hope that the outcome of the bringing up of the subject here now might be to bring together our local experience. Seeing the title of the paper that was to be read here this evening, and being interested in it, in looking over a recent medical journal my eye was caught by a paragraph which I would beg permission to read, as being particularly germane to the subject in hand [reading]:

"One of our American physicians, traveling in Russia, writes as follows: 'At Odessa in Russia I met Dr. Mareschell, a man who devotes his entire attention to the diseases of the male gen-

ito-urinary organs. He tells me he has castrated fourteen times, and operated on the vas deferens thirteen times for enlarged prostate, with the result of benefiting none of his patients, but of sending two victims to the insane asylum as the result of his interference. He is bitterly opposed to the operation, and says that the benefit surgeons claim to derive from it is only temporary in character and is brought about solely by the patient's being confined for a time in a horizontal position.'"

This is a statement of a class which is heard from many sources. The opposition to this particular method of dealing with obstructive prostatic enlargement has been referred to by the author of the paper. In a paper presented before the American Surgical Association a year and a half ago by Dr. Cabot of Boston, a very extensive and exhaustive examination was made by him of all published cases, and as the result of his examination it seemed that one of the most fatal of the operations which are done nowadays was this of the removal of the testicle for the relief of hypertrophied prostate, the mortality being quite as great as that of the more extensive and bloody operations for the removal of the prostate itself, and exceeding that of many operators in abdominal hysterectomy. The only fatal case which has been detailed to us this evening—that is, the only case in which death occurred within a short time after the operation, if I remember correctly—was one which occurred in the third week after the removal of the vas deferens. If we might argue from this experience at the Kings County Hospital it would seem, also, that exsection of the vas deferens was a more serious and dangerous operation, as far as its mortality is concerned, than was exsection of the testicle; and on the same line, if we can argue from Dr. Cabot's statistics, exsection of the testicle is even a more dangerous operation than exsection of the prostate itself; and if we can accept these statistics of Dr. Mareschell of Russia, if there is any operation which is utterly useless and to be cast aside and rejected altogether, it is both of the operations of castration and vasectomy itself.

Now, it seems to me that all such conclusions and such statements bear on their own face their refutation, and it is really unnecessary for us to seriously take them into consideration or permit them to affect us in the selection of the operative procedure which we shall ourselves resort to for the relief of those patients who present themselves to us. Even the comparatively small series of cases which has been presented in the paper this evening seem to me to carry with them a degree of scientific value and of

therapeutic helpfulness which no amount of brilliant generalization such as those which I have referred to could bring to us. It has been my own lot to observe the influence of the removal of the testicles for the relief of prostatic hypertrophy in ten instances. There has been no mortality attending these operations. Most of them have already been published by me. The later results, in the years that have passed, I have watched with great interest, and there is no pleasure which is greater than that which comes to the mind of the surgeon as he sees such cases years after they have been subjected to interference for the relief of such a serious condition, and finds them actively engaged in life and apparently free from all urinary disturbance. Such is the case in most of these patients whom I have been able to follow. Their physical vigor, their mental strength, their general activity, have been very markedly increased and preserved in the years that have elapsed since the operations to which they were subjected.

There were three other patients in addition to the ten which I have mentioned who were operated upon by the removal of portions of the vas deferens at the same time that a suprapubic cystotomy was done for the relief of bladder distention or the removal of stone. One case died within a short time from kidney conditions existing previous to operation; in the other two very great improvement in the prostatic obstruction quickly followed, and the closure of the suprapubic sinus was brought about in due time. One of these patients, though greatly relieved, still has four or five ounces of residual urine which he empties with catheter twice daily, and has occasional exacerbations of cystitis which have caused him to express the wish that instead of having had a portion of the vas deferens removed he had had his testicles also taken out, for he believes, knowing the condition of other patients so operated upon, that if his testicles had been removed he would now be entirely free from all his troubles. In the other case, after the healing of the suprapubic sinus and resumption of the ordinary duties of life again, the obstructive symptoms gradually recurred, so that at the expiration of three months he returned and asked that his testicles should be removed. His testicles were removed, as the result of which a very prompt amelioration of his obstructive symptoms again followed, and this amelioration has been permanent. Two years now have elapsed and he is a well and active old gentleman who may be seen any pleasant afternoon horseback riding in Prospect Park.

The results which I have alluded to under my own observation, added to those results which have been reported to us by Dr. Winfield, serve to strengthen me in the conclusion which had fastened itself upon my mind in the early part of the history of this critical operation, that in it we did have a very valuable surgical and therapeutical resource in dealing with a most dangerous and difficult surgical condition. As the years go by I believe that there is more and more reason for the surgical world to congratulate itself upon the addition of this particular procedure to its resources.

As regards the *modus operandi* of relief I would like to call your attention to a theory which has been a very attractive one to me, as to the relations between the secretion or the functional activity of the testicles and the prostate. Physiologically, there is reason for the belief that the secretion of the prostate is supplementary to the secretion of the testicles; that the prostate in that respect is a satellite to the testis. It has seemed to me, therefore, that there was a very close analogy in that respect to the relations existing between the mammary gland and the uterus and ovaries; that as the function of the mammary gland was to secrete that which was to supplement and nourish the product of the functional activity of the ovaries and uterus, so the function of the prostate was to secrete a fluid which was to supplement and make of greater activity the secretion of the testis, and we know well that when for any reason the function of the pelvic generative organs is arrested, the functional activity of the mamma is likewise arrested, that it shrinks and atrophies and becomes no longer an active glandular organ. So it seems to me that in arresting the functional activity of the testis, in removal of the testis we remove that which calls for and stimulates the activity of the prostate, and the prostate being no longer called upon for its functional activity, it atrophies, diminishes in volume, and no longer is a source of obstruction in those cases where there has been overgrowth of the gland, and that it is in this way that we are to explain the action of orchidectomy, rather than by any assumed analogy between adenomata of the prostate (the utriculis hominis) and the uterus and its fibroid tumors.

Dr. Henry Wallace: At the last meeting of the Brooklyn Surgical Society it was my privilege to present a paper on the operative treatment of hypertrophied prostate. I embodied in that paper a review of the usual operations for the relief of this condi-

tion: the operations of prostatotomy, prostatectomy, castration, vasectomy, and referred to the operation that Dr. Winfield has mentioned—the Bottini operation. In the making up of that paper I corresponded with about sixteen prominent surgeons and received reports from about twelve as to their experience with the comparative value of castration and vasectomy. Their returns were in some cases letters with brief answers describing their opinions; in other cases the results of the operations that they had performed. Nicholas Senn of Chicago stated that he never did unsex a man for the relief of hypertrophied prostate, and he probably never should. Hunter Maguire of Richmond, Va., considers the operations of castration and vasectomy out of place entirely in the treatment of these conditions. I had reports from sixteen cases of castration. In only half of them—eight cases—were the reports satisfactory and in favor of the operation. I heard from ten cases of vasectomy, and in only one of these was the result satisfactory at all. A few weeks ago Dr. Meyer of New York City presented to the New York Academy of Medicine a paper and demonstrated the Bottini instruments for the relief of hypertrophied prostate. Dr. Meyer, of course, does not place in the background the operations of prostatotomy, prostatectomy, and the other radical operations, but at the same time he thinks we should look at these operations in the form of a step-ladder. He considers that the Bottini operation should be tried *first*, and then go from that to vasectomy, to castration, and so on to the more serious operations, if required. The Bottini operation, for those who are not acquainted with the instruments and procedure, is the treatment of hypertrophied prostate by the use of the galvanocautery. The Bottini incisor is shaped something like a lithotrite with a short curved beak; in that beak is a retractable platino-iridium knife which is operated by a wheel in the handle of the instrument. This is introduced into the bladder, and by turning the wheel in the handle of the instrument the galvanocautery knife is protruded and an incision is made into the prostatic hypertrophy of two or three centimeters in length and a quarter or half an inch in depth. Bottini has operated, in the last twenty-two years, upon something over eighty cases. He has had less than two-per-cent. mortality and has had no return of the disease. Freudenberg of Berlin has also had some experience with this operation. He has performed now, including his latest report, eighteen of these operations with the greatest success. He reports the operation as having been performed on very seri-

ous cases—one was that of a man eighty-one years old, broken down from the results of sepsis and uremia from prolonged urinary retention. The instrument was passed (three incisions made in the growth) and after three or four days the stream came without any difficulty. In no case was catheterization required after this operation. It is performed under local cocain anesthesia, avoiding a general narcosis; in itself a great advantage.

Now, it seems to me, comparing the results of the Bottini operation with the others, and looking at the mortality of prostatectomy, which is 16⅗ per cent., according to White, for both the suprapubic and perineal operation; and White also gives the result or mortality of castration as 18 per cent., and that including the very serious cases hopeless at the time of operation; these being excluded bring it down to 7 per cent.—that comparing these figures with the results of the operations by the Bottini method, I do think the profession ought to give more attention to this procedure. Freudenberg believes that vasectomy and castration for prostatic hypertrophy will sink into oblivion in the same way that oophorectomy has, to a great extent, in the treatment of uterine fibromyomata. I myself have operated on only one case—a double castration. He had had retention for a long period; residual urine and all those unpleasant symptoms. The operation was done last spring and the patient has since had perfect health both mental and physical.

Dr. J. D. Sullivan: I am glad to hear something said on the other side of this subject. We all know that the afflictions due to enlargement of the prostate are very difficult for the physician or surgeon to manage, and, as a rule, the treatment is very unsatisfactory to the patient. I am very much pleased, and somewhat surprised, with the favorable results obtained by Drs. Winfield and Pilcher through this peculiar method of treatment. So far as my knowledge extends, there are only a comparatively few surgeons who have obtained such uniformly good results as have been reported here to-night.

I have done some work in this line, and observed some cases operated upon by other surgeons, and thus far I have been unfavorably impressed with the results obtained. I must confess that I cannot accept any of the theories which have been advanced as to how castration or removing a portion of the vas deferens could possibly diminish in a few days the size of the large prostates we meet with. For enlargement of the prostate is not a uniform condition. There are many varieties of enlarged prostates and

they are dependent upon different pathological conditions. The most frequent kind is due to a hyperplasia of the stroma—the cellular or fibrous tissue of the gland. As the hypertrophy progresses the organ becomes very dense and hard. Another form consists in a true hypertrophy of both the glandular and stromal tissue. Still another variety is described in which the glandular tissue predominates over the stromal; and again we occasionally meet with enlarged prostates which are due to a gouty infiltration.

Now the point which I wish to bring forth is, how can any single and uniform method of treatment prove equally effectual in such diverse pathological conditions as we find to exist in hypertrophy of the prostate. In other words, while it may be possible that removing the testicles or a portion of the vas would be the means of reducing the glandular elements of the prostate, I cannot conceive how the hard fibrous or gouty structures could be influenced by the same operation. I am desirous of more extensive observation and experience on this subject.

Dr. Morton: There is one point which Dr. Winfield has alluded to which I should like to emphasize a little more strongly. Until within a very short time the operations for the relief of prostatic enlargement were extremely dangerous and very difficult to perform, and, as a result, were comparatively seldom undertaken, and then only after careful consideration. When the operation of castration was presented to the profession it was so easy to perform and the mortality was so comparatively small that a great many men began to castrate patients who complained of bladder difficulties, assuming them to arise from prostatic obstruction, when the real difficulty was somewhere else.

In the past two years I have had three cases which impressed this forcibly upon my mind.

The first one was an old man over seventy, who had a good deal of difficulty with his bladder, from frequent urination, painful urination, and so on.

He had been under the charge of a doctor who had advised a castration or vasectomy, without having made any careful examination of the local conditions. The case afterward passed into my hands and on examining the man I found he had a long foreskin and a very small meatus—a pin-point opening. I did circumcision and cut the meatus, and passed a 30 sound into the bladder, and the difficulties of urination were entirely relieved.

The second case was equally instructive. Another old man complained of frequent urination, and catheterization was diffi-

cult. Castration had been advised, but he had objected to the operation.

Examination showed that his bladder contained numerous calculi, which afterward disintegrated spontaneously, and were passed through the urethra.

The third case was somewhat similar. He had suffered from retention of urine, at times frequent urination, cystitis, etc. The symptoms had all been attributed solely to an enlarged prostate, and he had accordingly been castrated. Six months later he came into my hands suffering from retention of urine and intense pain.

I examined the bladder with a searcher and found a large stone, which I subsequently removed by suprapubic cystotomy. The stone weighed three drams.

At the time of operation I examined the prostate and found it to be but slightly enlarged—not enough to cause any obstruction to the outflow of urine.

These three cases serve to demonstrate the fact that we ought to examine our cases carefully and consider all the facts before advising castration.

It seems to me that operations of castration or vasectomy ought not to be considered at all as long as the patient is able to use the catheter and make himself comfortable by catheterization and bladder-washing; but when the patient gets into such a condition that catheterization is difficult, and the catheter has to be introduced frequently, and when the cystitis is increasing; or, in other words, when there is "approaching breakdown in catheter life," as J. William White puts it, then is the time that we should begin to consider operative procedures, and we should do well to think of them in the "step-ladder" order, as Willy Meyer suggests, beginning first with the *least* dangerous proceeding—which is the Bottini operation, and if that does not relieve the symptoms try a vasectomy, and ultimately, if necessary, a castration.

Dr. A. T. Bristow: It seems to me that in judging of the value of any operation we ought not to consider the results of a few cases merely. The article of J. William White, which appeared in the March number of the *Annals of Surgery*, gives statistics, which, because of the large number of cases included, enables one to form a better opinion as to the value of vasectomy. He collected a very large number of cases of castration and a moderately large number of cases of vasectomy, and the conclusions which he reached at the close of the article were something like this: That success was to be expected in about ten per cent. of the cases of

vasectomy only, and in 80 per cent. of cases of orchidectomy, an improvement in perhaps 10 per cent. more, and a total failure in about 10 per cent. of cases of orchidectomy. This would indicate that vasectomy was a proceeding not to be depended upon.

One of the speakers this evening has objected to the operation of orchidectomy on the ground that he did not understand how it produced its results, but if we should follow the same reasoning in medicine, and use only remedies whose remedial effects we thoroughly understood, we should be obliged to abandon most of the materia medica.

We have in orchidectomy a surgical procedure with important testimony in its favor, which affords relief within a week, and relief which is permanent. It will not do to refuse the prospect of relief to patients simply because we cannot understand the way in which it is brought about. The relief is certainly undoubted. Whether the operation of orchidectomy is an operation that has come to stay is a question in my own mind. Every surgeon must have feelings of compunction in unsexing a man, and certain it is that even in quite advanced years the objection which these patients have to orchidectomy is not always a purely sentimental one.

Therefore, I think we must all sympathize with the sentiment of Dr. Senn, quoted by Dr. Wallace, that he had never castrated a man for enlarged prostate, and probably never would. If we are to credit the reports of Bottini's cases, it is possible that in his operation we may have a procedure which will prove efficacious and yet be free from the repulsive features of orchidectomy.

The mortality of this latter operation is but 2½ per cent. and it has one enormous advantage over all other operations, with the exception of vasectomy, and that is, it can be performed under cocain anesthesia. Many of these patients come to us with kidneys which are most suspicious, the subjects of ascending pyelitis from the cystitis from which they have been suffering. They are pretty uniformly bad subjects for general anesthesia, and if we can relieve them without exposing them to the dangers of general anesthesia; that fact in itself will, I believe, diminish the mortality very materially.

Dr. J. M. Winfield: The discussion has been so long and the hour is so late that really there is hardly time to say much of anything, but a great many points have come up during the discussion that I would like to answer had I the time.

Dr. Bristow's remarks on the difficulty of obtaining the consent of patients to orchidectomy are very correct, and as I said in the paper, be the man ever so old he will not willingly consent to have any of his anatomy removed. The statistics of Dr. White in the article referred to, as Dr. Bristow has given them, are contrary to those of Harrison of London. He, Harrison, obtained fifty per cent. of cures in vasectomy, and relief in nearly all the others.

I was very glad to hear one of the speakers emphasize the dangers of vasectomy and castration. I think that this probably is one of the greatest drawbacks to White's operation. It would seem utterly foolish to castrate or even remove a portion of the vas for a pin-point meatus or even an elongated foreskin. Most surgeons, however, I think would examine their patients more carefully and see that they did not have these obstructions before they undertook to remove organs which to most men are of vital importance.

Regarding the pathology of fibrous degeneration of the prostate, probably we could talk all night as to why castration or vasectomy should reduce a fibrous degeneration, and probably not arrive at much conclusion when we were done; but it is an undoubted fact that those hard, fibrous, degenerated prostates do reduce, do grow smaller and softer after the operations of castration and vasectomy. I think Dr. Pilcher can bear me out in that, or any one else who has done the operation and watched the results.

Regarding the Bottini operation, I have never seen it done. I have read the articles, and heard Dr. Wallace's paper. I think it undoubtedly must be the par excellence of beautiful procedure. But of course every one is not skilled in it; it is a new operation and it will take some time to get the necessary amount of skill to manipulate the electrical apparatus in order to get good results. Undoubtedly Willy Meyer, who is an expert in that line, can do the operation and have success, and there is no doubt that the originator, Bottini, can do it and have great results—perhaps far better than any other operation devised for the relief of prostatic enlargement.

The theories of why good results from this operation should be obtained are numerous. Dr. Pilcher's is an ingenious one and probably correct. It seems to me closely allied to the one I undertook to mention. A number of cases have been reported where castration has been done and relief been obtained for a short time.

I think a great many of those cases are very much better for the rest. I reported a case to-night where, after the man got up, the symptoms all returned and after a while he did get permanent relief. The rest in bed, the depletion, and good surroundings of the patient will undoubtedly relieve a great many of those cases. If any one in this room had a case of retention of urine dependent upon enlarged prostate, and would put the patient in bed and give a bath and a few other things—iodid of potash, and so on, and build up the patient, probably the patient would be relieved and go for a number of months or probably years before he would have a return of his bad symptoms.

The dangers regarding orchidectomy, as given by Cabot, it seems to me are greatly overdrawn. I think that his statistics, as I recall them now—I looked them up at the time I wrote the paper—are larger than White's and the men all over the world and the returns from almost every man who has done the operation on the testicles for enlarged prostate, and I think Cabot's fright is really too great. And it is unnecessary to go to Russia to find men who do not believe in castration, for we only have to go across the Brooklyn Bridge to find two men, very prominent in genito-urinary surgery, who condemn it tooth and nail, do not believe in it at all, think it was a great mistake that it was ever introduced, and almost condemn the man for starting a criminal operation. They are almost as bad as Nicholas Senn, who says he has never castrated a man and prays the Lord he never will. One man in New York condemns the operation almost as strongly as that, and he is one of the two most prominent genito-urinary surgeons in the country.

I thank the gentlemen for the discussion, and I hope next time I will have a few more cases to present.

AMBULANCE SERVICE.

The ambulance service in Brooklyn which has been in active operation since 1873 is seriously crippled for want of funds. The ambulance at the Long Island College Hospital has been taken away, and that of the Homeopathic Hospital has been discontinued.

DIPHTHERIA.

BY F. E. LAMBERT, M.D.,
Jersey City, N. J.

Read before the Practitioners' Club of Jersey City.

From the writings of some ancient physicians, it is evident that the disease we know as diphtheria existed in the earliest ages. The distinctive characters of diphtheria were already brought out by Bretonneau, in 1826, who applied to it the term diphtherite, whence originated the name diphtheria.

There are two forms of membranous sore throat of bacterial origin—that caused by the Klebs-Loeffler bacillus and that caused by streptococci, staphylococci, etc.

The characteristic local lesion is a pseudomembranous or necrotic inflammation of a mucous membrane, or sometimes of a denuded skin-surface or a wound.

Subsequent to the local lesion there follows a systemic poisoning, differing in a large degree in different cases. The systemic poisoning of diphtheria is due to a soluble poison elaborated at the seat of lesion by the Klebs-Loeffler bacillus and absorbed into the general system.

In most cases there is a third element—an added infection due to the various organisms that find in the local inflammatory lesion suitable conditions for growth. Other bacteria besides Klebs-Loeffler gives rise to necrotic inflammation, which, under these circumstances, has been called "pseudodiphtheria." Streptococci associated with other pus-forming cocci are capable of causing upon mucous membranes a pseudomembranous inflammation in no way distinguishable morphologically from the pseudomembrane of true diphtheria. The differential diagnosis is very important, as a knowledge of which disease we have to deal with modifies the treatment and prognosis.

Jacobi demonstrated in an article on follicular amygdalitis that we have a croupous inflammation which is not a true diphtheria, but we can have a true diphtheria, in which the membrane covers a small space so that there is apparently no fibrinous exudate, and yet after recovery shows its true nature by a characteristic diphtheritic sequel—a paralysis of some muscle or muscles.

This class of cases can be justly called "walking cases." An excellent example of this class is reported in England. A nurse took care of a fatal case of diphtheria. From that case she went to another family, several members of which soon developed diphtheria. A culture was made from her throat, which showed the Klebs-Loeffler bacillus in great numbers. At no time did she herself show any of the symptoms of diphtheria. There is no doubt that the Klebs-Loeffler bacillus is the cause of diphtheria. Accepting this origin of diphtheria, we must still take into account the conditions that modify the course of the disease. Inflammation of the nose, mouth, pharynx, and ear favor the growth of Klebs-Loeffler bacilli. It is doubtful if a normal mucous membrane can be infected. Therefore, all catarrhal conditions of the nose, throat, and ear in children should not be treated lightly or neglected, but receive prompt and efficient treatment. The germ is usually brought in contact with the mucous membrane during respiration. It has been known to have been communicated by domestic animals. Physicians frequently carry the disease. This is clearly shown from the number of cases which occur in their own families.

The stage of incubation varies from twenty-four hours to several days; it depends upon the diseased condition of tissues and their power of resistance. The local pathological changes occur on a mucous membrane or some abraded surface of the skin. The part becomes hyperemic and swollen; then usually in a few hours a grayish or yellowish membrane is formed. This membrane may be easily peeled off, or it may be a part of the mucous membrane itself and cannot be separated from it. The pseudomembrane is found on the tonsils, pharynx, uvula, soft palate, air-passages, conjunctiva, and rarely in the vagina and anus.

Portability plays an important factor in the etiology, which is exemplified by the following incident: Diphtheria occurred in a family residing on Staten Island. Two children of this family, perfectly well, were sent to the home of a friend in New York. There were no cases of diphtheria within, or in the neighborhood of, the home to which the children were sent. In a few days both children were attacked with diphtheria, and were sent back to their home. Two days afterward two young girls in the family into which the children had been received were attacked with diphtheria. The larynx was involved in both cases. One died after tracheotomy had been performed; the other recovered with-

out the operation. A sister and a domestic nursed the girls, and were in the room with them night and day. Neither they nor any other member of this family had the disease.

Unsanitary conditions favor the occurrence of the disease. The equine origin of diphtheria is believed by some. A physician once said his worst cases, usually fatal, were adjoining stables.

A new and unsuspected source of diphtheritic infection may have been discovered by a Brooklyn physician, who was called to see a child suffering with diphtheritic croup. On obtaining the history, he found that the affection began with a coryza, a tube was inoculated with the nasal secretion and sent to the Board of Health, and a pure culture of the Klebs-Loeffler bacillus developed. At this time there were two other children, in the same family, who had nasal discharge, but showed no symptoms of diphtheria. Cultures were made from these discharges, and the bacillus was found there also. Children of one year are more susceptible than adults (Jacobi reports three instances of the disease in the newly-born), the greatest mortality being attained from the second to the fifth year. In the case of children that have diphtheria every year, it is right to assume that errors of diagnosis have been committed. Boys seem more apt to get the disease than girls, which was noted by Fothergill in the epidemics of the last century.

The severity of the symptoms depends upon the form of the diphtheria. In the catarrhal, the symptoms are those of an ordinary catarrh—headache, backache, slight fever, pain in the throat on the attempt to swallow. In the mildest cases only a slight malaise may result. In the croupous form, the fever is higher, and the tumefaction is more marked.

In the septic form the products of decomposition rapidly enter the blood, A foul-smelling and irritating fluid is discharged from the mouth; the lips are eroded, and on the erosion patches of false membrane form. Capillary hemorrhages occur, which, in time, give it a gangrenous appearance.

The diagnosis of diphtheria by an intelligent physician in four cases out of five is correct. There are a few physicians who cure their patients of diphtheria two or three times a year.

A bacteriological diagnosis is easily made. Every city ought to furnish physicians free of charge culture-tubes, which could be obtained from some convenient points in the city. In late cases you would not wait for a bacteriological report, but begin treatment at once, for they demand prompt and heroic treatment.

The characteristics of the diphtheritic exudate are, it is deeply set and becomes part of the mucous membrane, penetrating it and being incorporated with it. It consists of necrosed mucous tissue and firm fibrinous material exuded from the vessels, and it cannot be detached without producing hemorrhage. The mucous membrane surrounding it is red, swollen, and edematous. The catarrhal form may be confounded with follicular tonsillitis, as the symptoms are very much alike, but the local appearances are very different. In tonsillitis the crypts are ulcerated and depressed below the surface; in diphtheria there is a membrane and not limited to the tonsil.

The most common sequel is paralysis. It may follow the mildest case; in fact, it is sometimes the first indication we have that the child has had diphtheria. Albuminuria is said to be found in all severe cases. Bronchopneumonia and thrombosis of veins are rare complications. Paralysis of the eye occurs at times. The internal rectus muscle is involved, causing an external strabismus. More frequently we have a paralysis of the ciliary muscle, which has as its effect a loss of the power of accommodation. One of the most dreaded and one of the most fatal sequelæ is cardiac failure. It usually occurs from one to six weeks after the onset of the disease. It is usually preceded by a very frequent, sometimes by a slow, pulse. There is an alteration in the heart sounds; they are feeble, and the first sound is short. Paralysis may occur in any part of the body, and the danger depends upon the degree. Acute dilatation of the heart, usually of the right ventricle, is not infrequent. After the appearance of the disease complete isolation of the patient is imperative. A room on the top floor, containing as little furniture as possible, is preferable. All curtains, carpets, and draperies should be removed from the room. Dishes and all utensils used in the sick room should be disinfected before they are taken to another part of the house. Discharges should be put into a strong mercurial solution (1–2000). An antiseptic vapor, as carbolic acid, turpentine, and eucalyptus, is of service to control the contagion in the room. All things that cannot be properly disinfected should be destroyed.

Pathogenic organisms do not thrive when they are exposed to sunlight and fresh air. The room should be thoroughly ventilated and fresh air allowed to flow into it continuously. No one but the nurse and physician should be allowed in the room. A linen gown should be worn by the physician, and the face and hands

should be washed in an antiseptic solution each time he leaves the room.

Mild antiseptic gargles and douches should be used on the throats of all persons exposed to the disease. The patient should not be allowed to leave the room until a culture of the throat has been made and an antiseptic bath taken. The clothes to be worn by the patient should be fresh from the laundry. When should the patient leave the room? The average case is three weeks, but many cases are not safe at six weeks. A culture of the throat should decide it. The asepsis and fumigation of the sick-room are as important as fighting the disease. In one of the cases which I will relate further on I advised the parents to take up the carpet in the sick chamber They said they "would destroy it after it was all over." Instead of burning the carpet, it was left to an ignorant woman to clean it with a strong carbolic solution. Two days after laying the carpet I was called to treat the youngest child (sixteen months of age), which proved to be one of the worst cases I have met in practice. On inquiry, I found that the carpet had simply been sponged with a weak solution of carbolic acid. With the aid of a trained nurse and two assistants, we saved the child, but it was a night and day vigil, a fight which lasted three weeks. An excellent disinfector, which takes the place of dry and steam heat, is an apparatus for generating formaldehyd gas, which is made by Richard Kny & Co., New York City. One of the advantages of this method is, there is no damage to disinfected goods.

In considering the treatment of diphtheria, we must pay attention to the local lesion, to the systemic poisoning, and sequelæ or complications. Of the many sprays, gargles, and solutions for swabbing that are recommended, equal parts of hydrogen peroxid and lime-water, or Loeffler solution give the best results. Whisky or brandy, glonoin, digitalin, and strychnia are the sheet anchors for supporting the heart and nervous system. A child two years of age can take from ten ounces to one pint of whisky in twenty-four hours. The harm is from giving too little, and not from giving too much.

The time has come that we can say with confidence we have a specific curative agent for diphtheria. In a communication on the present status of the treatment of diphtheria with the antitoxin treatment by Professor W. H. Welch, he stated: "Unless one denies absolutely the causal relation of the Loeffler bacillus to diphtheria, it must be admitted that the treatment of this disease by

antitoxin rests upon a sound experimental basis. No one can claim that laryngeal diphtheria requiring intubation or tracheotomy is anything but a severe disease. If the benefits of antitoxin are unmistakably manifested in these operated cases of croup, then the test is an experimentum crucis."

Of 4294 cases, 27.2 per cent. required tracheotomy or intubation. There were, however, many more cases of laryngeal diphtheria in this group than the ratio of operative cases would indicate, for it is the testimony of the great majority of the observers that the stenotic symptoms of laryngotracheal diphtheria are relieved without the necessity of operation in a much larger proportion of the cases treated with antitoxin than by any other method of treatment. As is well known, recovery without intubation or tracheotomy from descending laryngotracheal diphtheria, especially in children, is exceptional under all methods of treatment, and the greater relative frequency with which each recovery occurs under serum treatment is a strong proof of the efficiency of antitoxin.

The report of the American Pediatric Society's collective investigation into the use of antitoxin in the treatment of diphtheria in private practice shows out of 5794 cases a mortality of 12.3 per cent., including every case returned, but the report shows that 218 cases were moribund at the time of injection or died within twenty-four hours of the first injection. Should these be excluded there would remain 5576 cases (in which the serum may be said to have had no chance) with a mortality of 8.8 per cent. Of the 4120 cases injected during the first three days, there were 303 deaths—a mortality of 7.3 per cent., including every case returned. If from these we deduct the cases which were moribund at the time of injection, or which died within twenty-four hours, we have 4103 cases, with a mortality of 4.8 per cent. Behring's original claim that if cases were injected on the first or second day the mortality would not be 5 per cent., is more than substantiated by these figures.

Dr. Fischer stated in an article on diphtheria that Professor Baginsky's custom was, after diagnosis had been made by a bacteriological examination, to at once inject antitoxin, using as concentrated a serum as possible. Of malignant diphtheria he recognized three forms, *i. e.*, laryngeal, nasal, and septic. In a hospital in Berlin the average mortality from diphtheria for a number of years prior to the introduction of antitoxin was 37.63 per cent. However, in 1894 the mortality fell to 27.8 per cent., including

cases in which the other forms of treatment were used in addition to the serum treatment. In cases in which the serum treatment only was used, the mortality was 16.5 per cent. Of 460 cases at the Poliklinik who received immunizing doses of antitoxin, 18 contracted a very mild type of diphtheria rather late, but not a single one of these died. From 1875 to 1886 there were 539,901 deaths from diphtheria in Prussia, or about 45,000 yearly. A report published about three months ago stated that 1103 had been treated with antitoxin, of whom 970 had been cured and 133 had died, or a mortality of 12.5 per cent. Deducting 68 cases dying within the first twenty-four hours, there were 1035, with 68 deaths, or a mortality of 5.3 per cent.

Dr. Fischer reported the following cases:

He had been called to a child of three years by Dr. H. J. Boldt for the purpose of performing intubation. This was done, and a few hours later 2000 units of antitoxin were injected. The next day the child's extremities were still cold, and the stenosis was marked. He ordered an ice-bag to the neck and rectal feeding. Shortly afterward he was summoned to the house, and found the child pulseless and the tube out. The child was reintubated and stimulants were given hypodermically. Thirty-six hours after the first injection, 2000 units more were injected. The tube and a large cast were coughed out on the third day. The child was intubated twelve times, and a total of 8000 antitoxin units were administered. The child was under continuous treatment for two months, and recovered.

The second case was a child, two years old, who had had scarlet fever, and afterward pseudomembrane on the tonsils, pharynx, uvula, gums, and lips. It was a dispensary patient. The child received but one injection (4000 antitoxin units) of the New York Board of Health. Child recovered.

The late Dr. J. L. Smith said, regarding the effect of the antitoxin treatment on laryngeal diphtheria, that by this new treatment it seemed to him that this dreadful type of diphtheria had been largely shorn of its terrors.

Dr. Edwin Rosenthal of Philadelphia said he had seen formerly in 100 cases of intubation, 68 deaths, and that, too, where he had the advantages of good assistants. Under the antitoxin treatment, and under more adverse circumstances, he had only 4 deaths.

Dr. Hermann M. Biggs has collected data on antitoxin treatment in various parts of the world, and some of the most inter-

esting are from France, Germany, and America. In Berlin, for the first six months of each year, from 1889 to 1895, the average number of deaths was 668. In 1896, antitoxin was used considerably and the absolute number of deaths for the first six months was 294, or less than one-half the average number of deaths in the preceding six years. In Paris, the average number of deaths for the first six months in these years was 923. During 1895, the absolute number of deaths was 228, and in 1896 it was 329. These statistics were obtained from government reports. Monot had collected the deaths in 1895 in all French cities having a population of over 20,000, and had compared them with the average deaths in the period from 1888 to 1895. The latter was 2627, whereas in 1895 the actual number of deaths was 904. In no single year of this period had the deaths fallen below 2100.

In New York City the deaths from diphtheria and croup steadily increased for several years preceding the introduction of antitoxin, but suddenly dropped at that time. In 1894 there was an unusually large number of deaths, 2870; whereas, in 1895, it was 1976. The reports collected, regarding the effect of the day upon which the antitoxin treatment is begun, show that on the first day the mortality is 3.5 per cent.; on the second day, 8 per cent.; on the third day, 12.8 per cent.; on the fourth day, 23.6 per cent., and on the fifth day, or after, 35 per cent. From this it was evident that when antitoxin is employed on the fifth day, or later, the result would not be much better than under the usual method of treatment without antitoxin.

Professor Virchow, who was one of the early opponents of antitoxin, after witnessing the increase in the mortality during an enforced cessation of the antitoxin treatment, and again a diminution in the death-rate on the resumption of the treatment, said: "Theoretical considerations must yield to the brute-force of statistics."

Dr. Henry F. Koester of the New City York Health Department said he had used antitoxin from the first. He had seen about 400 cases, most of them late in the disease, of a severe type, and after they had been given up by the attending physician. Since April 1, 1896, he had injected 93 cases, with 2 deaths. One of these fatal cases was a child, dying in convulsions, seventeen days after the injection. The other child was injected on the fourth day of the disease, and died, seven hours after the injection, of croup and sepsis. This last case had been quoted in one of the medical journals as a failure of antitoxin. It had been stated there

that the child had been injected on the second day of the disease, but this was not true. When he had first seen the case the child had been in a very bad condition and he had only injected it with antitoxin at the urgent request of the attending physician. Of the 93 cases, 25 were laryngeal—5 of these 25 he had intubated himself, and all had recovered. He believed that his success in these cases was due to the use of cold instead of antipyretic drugs for the reduction of the temperature. Strychnin, glonoin, and cold applications were the chief factors in the treatment. In feeding these cases he had found that whisky and milk were not well taken by small children and he substituted aromatic spirits of ammonia. In the non-laryngeal cases he had seen such good results from the antitoxin treatment that he had come to look upon the physician who did not use antitoxin as guilty of criminal neglect.

The dosage of antitoxin seems to be an unsettled question. In the Wiilard Parker Hospital 6000 units were used in every case of diphtheria. That plan had been carried out in 30 cases. Of these, 18 were dead—a death-rate of 60 per cent. in the cases receiving these enormous doses. At one time last year it had been decided to increase the dose of antitoxin in this hospital. Accordingly the cases, alternately, as admitted, were given 2000 and 3000 units, respectively, in order to determine the value of the larger and smaller doses. Twenty-three cases received 2000 units, and in these the mortality was 34.4 per cent.; 22 cases received 3000 units, and in these the mortality was 50 per cent. Then the larger doses were abandoned.

Dr. W. E. Casselberry of Chicago said that during the past year cases of diphtheria stenosis, which had reached a point where intubation would naturally be done, had been saved by the use of antitoxin. He considered that the remedy had resulted in the saving of life, represented by as high a figure as 75 per cent., within twenty-four hours, the swelling which accompanies the deposit of membrane subsides, and the urgent symptoms pass away. Bronchopneumonia, which is so common a result of laryngeal cases, is not seen when the serum treatment is employed. He agrees it should not be used with the view of warding off the disease from healthy children who have been exposed. The records will show, in his opinion, that the unfavorable results come from the use of antitoxin in health. Its use should not be begun until there is a reasonable certainty of the diagnosis.

Dr. Larrabee of Kentucky said it was only because of their activity that germs were dangerous. He thought it strange that we attempted to produce immunity against a disease which did not immunize against itself. In his personal experience children had been sacrificed to antitoxin, but many more had been benefited. Twelve cases of stenosis, which would have surely perished without the aid it afforded, were saved. In some cases of inexplicable sudden death after the use of antitoxin, he had observed anuria. The occurrence of cutaneous eruption he thought an indication of the presence of other toxins or ptomains, which should not be present. Any bottle showing turbid deposit should be discarded.

Dr. Gray of Connecticut said that in Bridgeport he had seen about 70 cases treated. Twenty-eight were his own cases, and of this number 1 only proved fatal, 1000 to 2000 units as an initial dose giving better results than when the smaller doses were used.

Dr. Tomlinson of Michigan said that at the meeting of the association, one year ago, he had argued in favor of the method, and it is very gratifying to him to have so much now said in its favor. There is no more reason for withholding it because death had resulted than there would be to refuse the benefits offered by cocain, which had also its victims.

Dr. Bell of Georgia said there was no question from his observations that an antitoxin effect was produced. He had seen many cases treated in the New York Infant Asylum, where the Klebs-Loeffler bacillus was found in healthy throats. He believed in using the serum for its immunizing effects.

Dr. Wilson of Ohio said his cases died until he began to use antitoxin; then a series of 60 cases recovered under its use.

Dr. Knight of Pennsylvania did not accept the statement that diphtheria does not secure immunity to its possessor. He thought an attack of true diphtheria always did secure freedom from any subsequent attack.

Dr. Klebs said there were different forms of immunity, recurrences do take place in diphtheria, but not with the same frequence as recurrences in pneumonia. Many of the children in a family where diphtheria exists will show bacilli in the nose and throat, and still without any immunizing dose of antitoxin. They never develop disease.

Dr. H. W. Gross states that from the investigations conducted at the Children's Hospital of Boston, it was shown that out of

316 cases (the total number examined) 26 at one time or another showed the presence of the Klebs-Loeffler bacillus, this giving a percentage of 8.2. Out of the these 26 cases showing the organisms, 2 may be said to have had clinical diphtheria. Omitting these two, we may say that out of 314 normal throats and noses examined, 7.9 per cent. contained the bacilli of diphtheria.

The average persistence of the bacilli on the mucous membrane was 15 days; the shortest time was 1 day, and the longest 103 days, or over 3 months. Of these cases the nose was the principal habitat in 17 cases, or 65 per cent.; the throat in the remaining 35 per cent. In 1 case the Klebs-Loeffler bacillus was found, together with other organisms, in the ear, the child suffering from otitis media, which may or may not be due to this bacillus.

Dr. W. H. Thomson said the great uncertainty in the diagnosis was responsible for many errors in statistics, and another prolific source of error was to be found in our inability to make an exact prognosis on account of the very important part played in these infectious diseases by the nature of the individual "soil," as well as the ever-varying virulence of the pathogenic microbes themselves. It was wholly illogical, therefore, to suppose that any remedy could ever be specific for an infectious disease. Those who oppose the antitoxin of diphtheria argue as if the failure proved the uselessness of the treatment. Following out this line of argument, it would be difficult to "prove" in the same way that mercury in syphilis and quinin in malaria were useless. To settle its value at the present time ought not to be very difficult, for there were reports from all over the world regarding the results obtained from the administration of antitoxin in diphtheria. They comprise reports from 85 hospitals and a total of 9893 cases of diphtheria treated, with 1823 deaths, or a mortality of 18.3 per cent. Fifty-three of these reports, representing 7277 cases, compared the mortality during the antitoxin period with that previously existing, with the result that it had fallen fully 50 per cent. since the adoption of the antitoxin treatment.

The following cases, which came under my treatment, are of some interest.

Case I.—Boy, aged four years. On the day of my first visit the following symptoms were present: Fever, vomiting, and restlessness; pulse, 120; temperature, 101.8° F. The tonsils were swollen and turgid, and free from membrane. With the aid of a good light I found a small patch of membrane on the posterior wall of

the pharynx. It rapidly extended over the fauces, tonsils, uvula, and soft palate, blocking the throat. During the course of the disease the lips were covered with membrane. Hemorrhages occurred, which gave them a necrotic appearance. On the fifth day the membrane extended to the larynx. At this stage of the disease the case appeared to be hopeless. There was marked prostration; the breathing short and raspy. Temperature ranged from 100° to 105° F.; pulse, 120 to 158. Intubation was about to be be performed, but after the fourth injection of antitoxin the membrane began to be expelled. The child made a good recovery. The total amount of antitoxin injected, 7500 units.

Case II.—Rudolph G., aged sixteen months, brother to the above patient. The case was exactly similar, and recovered after receiving 6500 units of antitoxin.

Case III.—Kate S., aged seventeen years, was sick three days before I was called. The patient was very stout and short-necked. The mouth and throat were covered with membrane. She could not speak above a whisper. Pulse, 120; temperature, 102.6° F. Two thousand five hundred units of antitoxin were injected at once. The throat was swabbed ever hour with Loeffler's solution. Stimulants were freely given. Total amount of antitoxin used, 8500 units. Patient did not regain her voice until the beginning of the fourth week. She made a good recovery.

Case IV.—Millie S., aged ten. On one of my visits I was asked to examine the younger sister of above patient. I found no membrane in the throat. The pulse was 144; temperature, 100.8° F. I called the mother aside and told her if she developed diphtheria that antitoxin would not save her. The following day the tonsils were covered with a gray membrane. I immediately injected 2000 units of antitoxin. Child died on the third day from exhaustion and heart failure. Strychnin, glonoin, digitalis, and whisky were of no avail. I learned from the mother that several weeks preceding the attack of diphtheria she had received a fright in the street. A man dragged her through the streets to his home and accused her of theft. Since that time she would awake at night and cry aloud with fright.

Case V.—Joseph S., aged ten. On the first visit I found a small patch on the right tonsil. Pulse, 96; temperature, 100° F. Did not use antitoxin. The symptoms were mild throughout. I told the mother to be careful; that complications occur sometimes in mild cases.

The third day after I had stopped calling the father came for

me again. He said: "The boy's breathing is very bad." The larynx had become involved and the stenotic breathing could be heard in the adjoining room. I injected 1500 units. The following morning a large piece of membrane was expelled. The boy made a good recovery.

With so many reports of recoveries from this dreadful disease, from all parts of the world, with the serum treatment, it must appeal to every medical mind that it is a life-saver; furthermore, it should rank as one of the greatest discoveries of the Nineteenth Century.

It should be a clear, concentrated, and reliable preparation, administered early, under strict, aseptic conditions.

HEALTH DEPARTMENT OF BROOKLYN.

Among the many "advantages" which Brooklyn has gained by consolidation is the supervision of its sanitary needs by an assistant sanitary superintendent, instead of a health commissioner with full powers, the disuse of the Kingston Avenue Hospital for cases of smallpox, so that such cases hereafter occurring will be removed to North Brother's Island, and the disorganization of its ambulance service. It would be interesting to know how many medical men would favor consolidation if another opportunity were now given to vote.

THE CENTRIFUGE AS AN AID TO DIAGNOSIS; WITH A DEMONSTRATION OF THE URINE-SEDIMENTOR, HEMATOKRIT, AND THE SPECIAL APPARATUS FOR THE EXAMINATION OF MILK AND SPUTUM.

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Read before the Medical Society of the County of Kings, Dec. 21, 1897.

A short time ago I was asked by one of the members of this Society to make an examination of the blood and urine of a patient of his, a young woman who had recently come to the city from her home in the West Indies. Chyluria was a marked symptom, the urine looking like yellowish milk, and the existence of the *filaria sanguinis hominis* was suspected. No sediment was deposited from the urine after standing, for the chyle was, of course, of lower specific gravity than the fluid in which it was emulsified. Ordinary filtration was of no avail. Some other method was, therefore, required in order to clear the urine and separate the parasites, if any were present. In the examination of the blood another difficulty arose from the fact that the parasites are usually few in number and appear only at night. My efforts to overcome these obstacles led me to investigate the centrifuge as an aid to diagnosis, and it occurred to me that the information upon the subject gathered from a variety of sources would be of sufficient interest and possible assistance to others to justify its presentation before this Society.

Centrifugal force has been recognized for ages, and for many years its mechanical effects have been utilized in the arts and sciences. The centrifugal clothes-drier used in steam laundries, and the separation of cream from milk by centrifugation in large dairies are examples of its practical value. In sanitary work it is used to facilitate the analysis of numerous samples of milk, and to determine the sediment in potable waters. Still more recently special forms of apparatus have been devised for strictly medical work.

In this last-mentioned field of usefulness the centrifuge was first used to separate the solid ingredients of urine. Next, the principle was applied to the examination of the blood. When

the scientific diagnosis of pulmonary tuberculosis was found to depend upon the presence or absence of the tubercle bacillus in the sputum the aid of the centrifuge was again invoked. Last of all, with the introduction of more accurate methods of infant-feeding, the analysis of mother's milk has been aided by its use. Other forms of analysis might be mentioned, but as these four fluids are the only ones up to the present time for the examination of which special forms of apparatus have been devised, I will confine myself to their consideration.

Apparatus.—Before speaking of the technic involved in these processes it will be necessary to describe the forms of apparatus that are now available. These vary in construction according to the motive power employed.

The pioneer centrifugal machines were put in motion in much the same way as a boy spins his top. A heavy rimmed wheel, from one to two feet in diameter, fitted with spring clips to hold the tubes, and enclosed in a tight-fitting thin metal cover to diminish air resistance, was supported horizontally upon a thin vertical spindle. This spindle was held in cone bearings at its upper and lower end. The fluids to be examined being in place and the cover fastened down, a long cord was wound tightly around the spindle, and then quickly withdrawn. The wheel with its heavy rim would spin for several minutes, and then, if desired, the process could be repeated.

Another form had a system of gears connected with the spindle by a simple interlocking device, and was set in motion by means of a hand-crank. When the highest possible speed was secured the gears were disconnected, and the wheel allowed to run down as before. A well-constructed machine would often run fifteen minutes.

Machines of these types were in vogue in Vienna in 1891. They were efficient and fairly satisfactory for hospital purposes, but had some disadvantages. They were very heavy and bulky, and their velocity was greatest at the beginning of the process, and steadily decreased until the wheel stopped.

Other machines of large size were soon constructed for hospital and laboratory use. The wheel was as large as before and similarly placed. It was made of a solid plate of metal about an inch in thickness. Just within the periphery a number of slots were cut an inch apart, and each corresponding in its long axis with the radius of the wheel. The milk, urine, or water to be examined was placed in a glass tube within a metal protector.

These protectors were supported on paired pivots which rested in notches cut in the upper walls of the slots. Water, steam, gas, or electricity was used as a motive force, and as the rapidity of revolution increased the tubes swung into a horizontal position, and were quite concealed within the thickness of the wheel. Air resistance was thus reduced to a minimum, and great economy of power gained.

For use in places where the Edison current or galvanic or storage batteries can supply power two forms of electric centrifuge are now manufactured. They require for their proper use a suitable rheostat, and proper connections. By this means the amount of current can be regulated and the rapidity of revolution be so adjusted as to secure the best results with any given fluid. Such instruments are of great value in hospitals or laboratories where a large number of examinations are made daily. They are practically noiseless and economize time and strength. On the other hand, they cannot be taken to the bedside, and are thus of little use for the examination of the blood, since such an examination must be made before there is time for coagulation. They are much more expensive than other instruments and they cost more to operate them. They are especially apt to be damaged if the current is too strong, and are, in general, more liable to damage.

The Purdy electric centrifuge was first in the field. It gives good results, but is needlessly heavy, the tubes strike against the base, and the motor is a poor one. Its price is $37.

A better centrifuge is the Heiman electrical centrifuge. Through the courtesy of Dr. Van Cott I am able to show the instrument itself. It has been used at the Hoagland laboratory for some time and gives entire satisfaction. It is compact and well-constructed. It costs $35.

Still another electric centrifuge is on the market. It is handsomely mounted upon a mahogany case, that encloses the motor. Its speed is not constant, and it is not recommended even by the manufacturers themselves.

For the general practitioner none of the centrifugal machines thus far mentioned is to be recommended. For his purposes the centrifuge of choice must have certain special qualifications. It must be compact and portable, and of as little weight as is compatible with ease of running strength and durability. Its action should be as noiseless as possible. It should be easy to clean and to keep clean. If used for milk, water, and urinalysis

only, with a moderate effort it should develop 2500 revolutions of the spindle per minute; if for blood and sputum examination, from the same effort 10,000 revolutions should develop. The length of the arm is of practical importance, since "the centrifugal force of two equal bodies, moving with equal velocity at different distances from the center, is directly as their distances from the center." In other words, the longer the arm the greater the centrifugal force which develops with the same number of revolutions. The urine-tubes should be so arranged that they do not strike the handle of the machine when it is at its highest point, nor should they strike against the standard when the motion stops. If this happens, the sediment is apt to be disturbed. The machine should be provided with a clamp, so that it may be easily and firmly fastened to a suitable firm support, and, by the way, a sewing-machine or typewriter-table makes an excellent one. Esthetics should be consulted in beauty of finish. Last, but by no means least, the price should be moderate.

I have succeeded in securing more or less satisfactory pictures of a variety of centrifugal machines. Like every other mechanical device, there is a choice. Some are superior in one particular, others in another. With each picture will be found a summary of the points just mentioned, and you can draw your own conclusions.

While these plates are being examined let us turn our attention to some of the practical details involved in the use of the centrifuge.

Urinalysis.—As is well known, the results obtained by allowing urine to deposit such solid ingredients as it may contain within a conical dish, relying solely upon the force of gravity for the rapidity of the process, and then examining the sediment with the microscope, is exceedingly fallacious. The reasons for this fact are very simple. No matter how much care is exercised in the collection of urine, it soon becomes contaminated with bacteria and fungi, always floating in the air. These multiply rapidly, and by the time sedimentation is complete—that is to say in from twelve to twenty-four hours—numerous changes, due to decomposition, have occurred. The reaction is often changed. The crystals found are, for the most part, secondary products, and did not exist within the body at all. Sugar, if originally present, may have entirely disappeared, owing to the action of yeast-ferment. The more delicate forms of casts are also apt to decompose early. The fungi themselves may assume strange and

unknown forms, and our final conclusions may be entirely erroneous.

All of these errors may be avoided by the use of the centrifuge; for with this instrument at our disposal we have a method of securing the casts, crystals, and other solid ingredients in such a form that they can be examined at once—within five minutes from the time when the liquid is placed in the sediment-tubes. No chemical changes will have taken place, and the normal and pathologic elements can be easily determined.

For the proper precipitation of the sediment 2500 revolutions per minute for three or four minutes gives the best results. A higher speed than this is apt to distort or break the hyaline casts. The number of revolutions of the crank necessary to obtain this rate can easily be calculated with each machine, and with a watch at hand the desired result can be easily obtained.

The urine-tubes should contain a trifle over fifteen cubic centimeters. The lower ten cubic centimeters should be divided into 100 equal parts by accurate scale. The percentage of sediment may thus be read off. If the exact percentage of the chlorids, phosphates, sulphates, albumin, or sugar is desired, the upper five cubic centimeters should be used for standardized reagents. If it is not convenient to carry bottles of liquid reagents, reagent-tablets are now to be had which give excellent results. A small urinometer can also be procured that will easily go inside one of the tubes.

The shape of the tubes is also important. Many of the tubes have a slight curve at the top. This makes them more convenient for pouring purposes, but care should be taken that they do not rest upon this lip when in the aluminum guards; the great strain upon the unsupported glass will often cause them to break. Neither should they be too long, for then they will catch within the metal arms when, during revolution, they become horizontal; when the motion ceases, the urine will spill over the machine, the operator, and the floor, and the analysis of anything, except profanity, will be a failure. The simple, straight tubes give very good results.

If expense is not considered the tubes devised by Jacobi, having a bulb at the bottom like that of an urinometer, may be used. These favor the removal of the liquid, and collect the sediment well, but they break easily and are difficult to clean. They are, however, of great value in examing milk, urine, or water for typhoid or tubercle bacilli, for the upper fluid can be poured off,

and the contents of the bulb still further concentrated in the sputum tubes.

If the amount of sediment is small and it is desirable to increase it, the upper twelve cubic centimeters may easily be decanted after sedimentation, and as this is practically filtered may be used for chemical tests, while the tube is refilled with non-sedimented urine. In this way half a pint of fluid may easily be sedimented in a few minutes.

Whatever the size or shape of the tubes used, it is essential that they should each contain the same amount of urine. If this is not attended to the distribution of the load will be so uneven that the machine will vibrate badly, and the spindle may possibly be bent.

Milk Analysis.—The centrifuge is of use in the analysis of milk. In the first place, it enables one to make a fairly accurate reply to the question, "Are there bacteria present in this milk?" The means by which this can be accomplished has already been indicated.

In the second place, the determination of the amount of fat or cream that is present in any given sample of milk can be determined with greater rapidity and accuracy with the centrifuge than in any other way. To do this requires a special form of glass tube. Two forms are to be had. They are practically the same, the peculiarity of these tubes being that owing to the lighter specific gravity of the fat the scale used to indicate percentage must be at the upper end of the tube, and, in order that the scale may be easily divided, this end of the tube is much smaller than the lower part, and of uniform caliber.

Although the cream will separate by simple rotation, it has been found that for the accurate determination of percentages certain additional steps are required. The technic finally adopted is substantially as follows:

By means of a suitable pipette 5 c.c. of the milk to be examined is poured into the milk tube; to this is added one centimeter of a mixture containing fifty parts by volume of hydrochloric acid, thirteen of methyl alcohol, and thirty-seven of fusil oil. Sulphuric acid of a definite specific gravity (1.3) is then added drop by drop until the tube is filled to the zero mark. The mixture should be well shaken at each addition. The other tube is then filled in the same way, and the two are rotated for three minutes at a moderate rate of speed (2000) revolutions per minute. The fat collects in the inner end of the tube and

when the machine is brought to a standstill the percentage can be read.

Very rich milk or cream may be diluted with one or four volumes of water before being examined, care being taken to multiply the result accordingly.

Sputum Analysis.—For the perfection of this method of concentrating the crystals, spirals, and bacteria in sputum we are chiefly indebted to Drs. Ashton and Stewart, whose joint paper upon the subject was published in *The Medical News* in the issue of October 6, 1894. To quote from their valuable paper: "Undoubtedly the most important evidence that a destructive process is taking place in the pulmonary structure is to be found in the discovery of the elastic fibers in the sputum. For the purpose of demonstrating their presence and in the examination of the sputum for tubercle bacilli when these exist in very small numbers, the value of the centrifugal machine can scarcely be overestimated. Again and again have our observations demonstrated to us the facility whereby in such cases the presence of bacilli can be discovered by the aid of centrifugation, and in cases, too, in which, at the same time, they were found only after much trouble and repeated examinations by the ordinary methods. Such diagnoses, even, which were made after other methods had failed to detect the bacteria, have later been confirmed by the autopsy."

The technic for this procedure involves the use of certain special apparatus. The centrifuge must give a rotation of 10,000 revolutions per minute to secure good results with a sputum-tube carrier of the ordinary length, though with the very long-armed instruments already mentioned, 5000 revolutions is sufficient. The tubes themselves are usually of the same length as the blood-tubes, in order that the same frame may be used. The usual length is 50 millimeters, with a diameter of 2½ millimeters. Many tubes are simply glass cylinders ground smooth at the end which presses against the occlusive pad. These tubes chip off around the edge very often in removing or in placing them in the frame. This difficulty is to a great measure obviated if the tubes are also ground around their terminal circumference for a distance of five millimeters.

The sputum to be examined need not be diluted in any way. It should be placed in a clean glass or porcelain dish and stirred with a glass rod till all flocculi are broken up and the sputum is of fairly uniform consistence. Then, by means of a small pipette or medicine-dropper, with an inch or two of rubber tubing at its end,

the sputum should be drawn into the sputum-tube until it is quite full. A tube is then placed in each end of the carrier and centrifugation completed. The sputum will then be found in two layers: one clear, at the proximal end; the other opaque, at the distal end. The tube is removed, and slight pressure at the proximal end will suffice to expel the solid contents upon a cover-glass, where they can be fixed and stained in the usual manner.

Care must be taken with each examination to have the glass tubes quite clean, and it is better to provide a clean washer at the distal end of the tube for each examination, in order that bacilli will not be carried over from one examination to the next.

Blood Analysis.—By far the best original work upon this subject, so far as the centrifuge and hematokrit attachment are concerned, has been done by a countryman of ours, Dr. Judson Daland. Dr. Daland's first article embodying the results of his researches was published simultaneously in German and in English in 1891, and has been the basis of a number of shorter articles that have appeared in various places and by various authors since then. The clinical studies were made in the wards of Professor Von Jaksch in Austria. He very soon found that the type of centrifuge then used in Vienna, to which allusion has been made, was not well adapted to his purpose, and it is largely to Dr. Daland's inventive powers that the attachment now known as the hematokrit was devised.

Since one object of the procedure was to do away with the necessity of using the hemacytometer for counting purposes, it was soon found that certain factors must be constant. The tube in which the blood is held must be of uniform caliber, must be graduated accurately, and must develop a constant quantity of centrifugal force dependent upon the distance from the center of rotation and the rapidity of revolution.

The spindles first used made 104 revolutions per minute and for each turn of the handle. The tubes were 33 millimeters long and 1 millimeter in diameter. They contained 27.5 cubic millimeters of blood. On the outside is a scale divided into 50 equal parts. In his original article the author recommended that for convenience of computation these dimensions be modified so that the tube be 70 millimeters long and 5 millimeters in diameter, and provided with a 200-division scale. The tubes now manufactured are 50 millimeters long and 5 millimeters in caliber, and are divided into 100 equal parts. The tubes should rotate with a uniform velocity of 10,000 revolutions per minute. Most instru-

ments are now so constructed that a rotation of the handle 77 times per minute will produce this effect. These figures are of much importance, for as the computation of percentages depends upon Dr. Daland's experiments, any variation in these factors would give widely different results.

At first the blood was diluted to avoid coagulation, and though this is now rarely done, it may be well to remember that after a great variety of fluids had been used for this purpose a 2.5-per-cent. solution of bichromate of potash gave the best results. It does not decompose, it prevents coagulation, preserves the shape of the corpuscles, hardens them, and has a good contrast color. It can be used with the hematocytometer as well.

The technic is simple, but there are some minutiæ that should be borne in mind. Although the ear or ball of the thumb is recommended as the best places to puncture for the blood required, I prefer the little finger of the left hand as being the place most convenient and least likely to be noticed by the patient after the cut is made. The finger must be well cleaned, and rubbing it with a piece of cotton soaked in ether, just before making the puncture, is advised in order to remove all fatty material. These precautions may also prevent infection, which, if it occurs, is an annoyance.

The pin, the needle, or the lancet may be used to make the incision. I have preferred to use a small, spear-shaped instrument. Recently, the question has been nicely solved by Dr. Veranus A. Moore of Cornell University. The instrument devised by Dr. Moore is really a spring lancet, using a spear-shaped blade fastened to a spring trigger, and secreted in a small brass tube, the end of which can be adjusted to the depth of cut required. This he calls a hemaspast. It is particularly advantageous with children and nervous persons, who dread anything resembling a knife.

The tubes must be exactly filled, and this requires some little practice. A capillary tube 50 mm. long is closely connected with the blood tube by a rubber tube 1 cm. long, and with the mouth by a long rubber tube. This capillary tube acts as a window to show when the blood tube is filled, and also serves to prevent the suction acting too suddenly. When the blood tube is filled, be careful to place the finger tightly over its free end before removing the rubber. It will prevent displacement.

Centrifugate two tubes at the required speed for two minutes, read off the scale carefully (most tubes now have a magnifying

index like a thermometer) and add five cyphers to get the number of red blood-corpuscles. A black background is a help to read the scale.

When it is necessary to carry the blood away for examination, dilute with the bichromate solution and carry in the pipette used for counting white blood-cells.

To clean the tubes, use water first, then absolute alcohol, and finally ether. If the pipette contains a large clot it should be filled with a concentrated solution of caustic potash or soda and placed in a test-tube filled with the same solution. In a few hours the clot is usually dissolved.

According to Daland, "The hematokrit gives results as accurate as, if not more accurate than, the Thoma-Zeiss hemacytometer, requires less skill, calls for no eye-strain, and the volume and number of red blood-corpuscles per cubic millimeter, and the volume of white blood-corpuscles, may be determined within ten minutes."

These, then, are the claims that the centrifuge has as an aid to diagnosis. That portion of the practice of medicine which consumes the greatest amount of time is diagnosis; after that basis is made thoroughly secure, prognosis almost speaks for itself, and treatment, although the most important part of the science of medicine, is, in most cases, simple. Any means that will assist us in forming a diagnosis quickly and with increased accuracy is always regarded with favor by the medical profession, and a knowledge of the manner in which this assistance can be secured should be as widely known as possible.

I have stated the claims of the centrifuge to be regarded as such an assistant. I trust you will agree with me that its use may oftentimes be of great value.

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"Use of the Hematokrit." By S. G. Hedin, M.D., *Skandinävisches Archiv für Physiologie*, Bd. 11, Heft. 11 and 111, p. 134, 1890.

"Über die Verwendbarkeit von Hedin's Hämatokrit zu Hëmatologischen

Untersuchungen." By Professor R. von Jaksch (Prague), *Präger Medicinische Wochenschrift*, No. 17, 1891.

"A Volumetric Study of the Red and White Corpuscles of Human Blood in Health and Disease by Aid of the Hematokrit." By Judson Daland, M.D., *Fortschritte der Medicin*, October and November, 1891. Also, *University Medical Magzine*, vol. iv, pp. 85–109, November, 1891.

Ibid. Franklin Institute Journal, September, 1893.

"A New Hematokrit and a New Technic." By Judson Daland, M.D., "Proceedings of the Twelfth International Medical Congress," Moscow, August 26, 1897.

"Studien zur Physiologie und Pathologie des Blutes und der Lymph." By M. Löwit, M.D. Gustav Fischer, Jena.

"A Simple and Accurate Method of Estimating the Percentage of Hemoglobin." From *Medical News*, p. 303, September 4, 1897.

"The Hemospast." By Veranus A. Moore, M.D., *Medical Record*, July 10, 1897.

"Uber die Brauchbarkeit der Centrifugal Kraft für Quantitative Blutuntersuchungen." By Judson Daland, M.D., *Separat-Abdruck Archiv für Gesammten Physiologie*, vol. xl.

DISCUSSION.

Dr. De Forest: Three manufacturers, Messrs. Richards & Co. of New York, James G. Biddle of Philadelphia, and Bausch & Lomb of Rochester and New York, have kindly sent me instruments for purposes of demonstration. These are here upon the table and a few moments will suffice to show how easily they can be used. Here is one, the only one, by the way, of those mentioned, which comes in a case. This instrument is very simple in its manipulation. There are two screw-posts, one at the right and the other at the left of the central disk. The placing of the handle upon one post gives 130 revolutions of the spindle; on the other a revolution of 30. For urine work the lower speed is used; for the hematokrit the higher. A simple unscrewing of the set-screw at the outer end of the post is all that is necessary to change the position of the crank. This can easily be adjusted.

It will take but a moment to show you the ease and facility with which a precipitate is obtained in these instruments. Suppose, for example, that we wished to determine the amount of albumin in a specimen of urine. The tube is filled up with urine to the 10 c.c. mark; to that is added the requisite amount of the reagent, the two are well mixed and the tube is put in the centrifuge. As it is just as easy to show two of these tests as it is one —in fact, I have to fill the other tube so the tube will balance—I will show on the other side a reaction for chlorids in the urine of pneumonia.

The two tubes being thus in position—the handle is revolved,

of course it is not attempted to make as thorough a precipitation as would be done in an actual examination, but you can see already that two minutes of rapid revolution would precipitate all of the sediment.

The blood is examined in much the same way, and I have put on this second centrifuge, the apparatus for the blood, the hematokrit. The crank of this instrument is also removable for ease of carrying. This gives a rapidity of about 10,000 revolutions per minute, and blood quickly separates into corpuscles and serum.

This remaining instrument gives a revolution of about 10,000 and the tubes here are also easily removed. The hematokrit can be adjusted in an equally short space of time. The spindle revolves 130 times every time the crank is turned. In that very high rate of speed, as you will see, the machine is an exceptionally steady one, and is practically noiseless. Of course, much of the noise depends upon the vibrations of the various articles on this table, but with the instrument on a solid shelf it is to all intents and purposes as noiseless as any instrument can be and still be strong.

THE MALTINE COMPANY.

The following letter has been mailed to the medical profession by the Maltine Company:

Dear Doctor:

Many manufacturers will undoubtedly advance the price of their products to the extent of the stamp tax which the Government is about to impose upon proprietary preparations, thus either reducing the profit of the retail druggists or shifting the tax directly upon your patients.

Despite the constantly increasing cost of barley, wheat, oats, cod-liver oil, quinin, and other commodities, which enter largely into the composition of the Maltine Preparations, *we have decided to bear the tax* of 4 cents per bottle which is to be imposed upon our output *ourselves.*

Although this will entail a heavy burden upon us, we deem it the duty of every patriotic citizen to contribute cheerfully and without quibbling such a share of the enormous cost of prosecuting the war as our Government may find it necessary to exact.

Yours faithfully,

The Maltine Company.

CORNELIUS N. HOAGLAND, M.D.

THE BROOKLYN MEDICAL JOURNAL.

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EDITORIAL.

CORNELIUS N. HOAGLAND, M.D.

In the death of Dr. Hoagland the medical profession has lost one of its most noble and generous benefactors. The Hoagland Laboratory, which he built, equipped, and endowed, will be his best monument. Since its opening more than a thousand medical students have received instruction within its walls and as practising physicians are now carrying on their life-work, treating the sick and injured in all parts of the world, with a skill and knowledge, the foundations of which were laid in the Hoagland Laboratory. Here, too, many physicians have been trained in the technic of bacteriological science; especially is this true of the surgeons of the army and navy, who have been attracted by the fame of its directors of bacteriology and the facilities for original investigation and research. As yet this institution is in its infancy; who shall measure the good that it will accomplish in all time to come? "For the promotion of medical science" was the keynote of Dr. Hoagland's benefaction, as it was declared to be in the article of incorporation the object for which the laboratory was built.

Nor did the Doctor's interest in his chosen profession end in this generous contribution to the cause of pure science. He was intensely interested in the local profession and appreciated most deeply its needs. He deplored the want of a library to which physicians could resort for instruction and profit. He regarded the building in which the meetings of the county society were held as discreditable to the profession, and repeatedly expressed himself as not only desirous but anxious to provide a home for the profession which would do honor to its members and to the city. At the same time he believed that it should be the home of a united profession. He could not understand why differences of opinion on matters unessential and purely theoretical should divide scientific men, and with such a condition he had no sympathy. To bring these men together he made the generous offer with which all readers of the JOURNAL are familiar. That the profession of Brooklyn is not to-day enjoying the advantage of a building unequalled in its appointments and a library rich in the treasures of medical lore, is due to the unwillingness of a few men to sink their personal prejudices for the good of the whole profession. To be compelled to say this is a matter of deep regret, but it is, alas! too true, and now that Dr. Hoagland has left us, the time seems appropriate to make mention of it.

Dr. Hoagland's sympathy went out also to the poor and needy, and there are few charities in the city which have not been the recipients of his bounty. Of all the physicians who have ever lived in Brooklyn none has been more generous than he, nor has there been one who has done more to shed luster on the city of his adoption.

NEW BUILDING OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

The building Committee of the County Society, consisting of Drs. F. E. West, Chairman, G. McNaughton, C. Jewett, W. Maddren, W. Browning, Secretary, and F. H. Stuart, Treasurer, have just issued a pamphlet which is intended for distribution among the laity to present the claims which the Society has upon the community at large for assistance in erecting the new building. In this pamphlet will be found the following papers: "The New Home of Our Society," by W. Browning, M.D.; "The Value of the Physician to the Public," by J. L. Kortright, M.D.; and "Free Medical Library," by H. A. Fairbairn, M.D. The paper of Dr.

Kortright has called forth a letter from J. H. Hunt, M.D., which is included in the pamphlet. The paper of Dr. Browning is illustrated with the architect's plans of the new building. Members of the Society who know gentlemen likely to become interested should endeavor to enlist their cooperation by sending them copies of this publication procured from the secretary of the committee.

CUBAN RELIEF COMMITTEE.

The amount of good already accomplished by this committee in the relief of the starving Cuban reconcentrados is incalculable and the work is still going on. We have been asked to speak a word in behalf of the undertaking and to act as agents for the transmission of contributions. Not alone will money be acceptable, but also clothing of all kinds, both new and second-hand, especially light-weight garments, such as blankets and all manner of bedclothing. If there are in the profession any who desire to avail themselves of the privilege of giving to this worthy cause, their contributions may be sent to the Society Room, 356 Bridge street.

PROGRESS IN MEDICINE.

OBSTETRICS.

BY CHARLES JEWETT, M.D.

IRRIGATION OF THE BOWEL IN ECLAMPSIA.

Prolonged irrigation of the bowel with normal salt solution has been used with brilliant success in the treatment of acute anemia, of eclampsia, and of other conditions in which intravenous infusion or hypodermoclysis has usually been employed. Grandin, Kemp, and Dawbarn of New York have reported remarkable results from continuous irrigation of the bowel with the salt solution at a temperature of 120° F. or higher. As a diaphoretic and a diuretic it is believed to surpass all other methods. The injection is given through a double current rectal tube. The quantity of solution must be large; not less than ten to twenty gallons are frequently used. Sené (*Jour. de Med.*, January 10, 1898) reports a case in which the patient was rescued from an apparently hopeless condition by this means. The patient was a woman the sub-

ject of a violent eclamptic attack in the seventh month of utero-gestation. Venesection was followed by arrest of the convulsions, but the woman sank into deep coma and the urine was totally suppressed. Bowel irrigation with tepid water was then practised for a half hour. Twelve hours later the patient had begun to rally from the stupor. A little later a small quantity of urine was passed. On the following day the coma had entirely subsided and the kidneys were acting freely. The woman was delivered on the fourth day after the eclamptic seizure and made a prompt and complete recovery.

VALUE OF CREDE'S SOLUTION FOR THE PREVENTION OF OPHTHALMIA NEONATORUM.

Schallehn (*La Semaine Médicale*, January 22, 1898): The divergence of opinion held by obstetricians with reference to the prophylactic value of the instillation of nitrate-of-silver solution against ophthalmia of the newborn has induced the author to publish the results obtained by this procedure at the obstetric clinic of Goettingen for the past nine years.

It should be observed that the prophylactic treatment is practised at Runge's clinic strictly in accordance with the method of Credé. The number of children submitted during these nine years to the preventive use of the silver solution was 917, not including still-births or children who succumbed during the first day, in which cases infection would not have had time to manifest itself. The number of cases in which blennorrhagic conjunctivitis developed in these 917 children was 2, or 2/10 of 1 per cent. In these two cases the first symptoms showed the eighth day after birth and the trouble was attributed to secondary infection.

In no case did any bad results follow the treatment. Nothing more than a transient irritation was noted.

INDUCTION OF LABOR BY INTRA-UTERINE INJECTION OF GLYCERIN.

(*La Semaine Médicale*, 18 Année, No. 5.) The possible dangers of injecting glycerin between the ovum and the uterine wall after Pelzer's method, are well known. Absorption of the glycerin occasionally results in intoxication attended with nephritic lesions, destruction of the blood-globules, and hemoglobinuria, chills, dyspnea, convulsions, etc. In view of the risks of the glycerin injection, Theilhaber proposed as a substitute the introduction into the uterus of a bougie composed of equal parts of glycerin and gelatin. We are not aware of any published experience with the use of Theilhaber's bougie. Helme

has suggested a modification of the glycerin injection which is simpler. The drug is injected drop by drop into the cervical canal only and the injection is several times repeated.

Recently Saft of Breslau has improved on the method of Helme. The glycerin is made to act through an animal membrane, by osmose, in quantity sufficient to serve as an excito-motor, but not enough to cause intoxication. The membrane employed is a fish-bladder. This is tied to the end of a flexible cannula, through which the glycerin is injected into the bladder after the apparatus is introduced into the uterus. The quantity of glycerin employed is 100 c.c. It is retained by sealing the distal end of the cannula. A light vaginal pack of iodoform gauze holds the apparatus in place. The precaution is taken to lodge the bladder just within the lower uterine segment near the os internum. The cannula is short, barely projecting through the cervix into the vagina. The fish-bladder is cleansed by repeated washings with ether, and is disinfected with an alcoholic solution of sublimate. Saft reports seven cases in which his method was used with satisfactory results.

OPHTHALMOLOGY.

BY JAMES W. INGALLS, M.D.

USE OF HYPERBOLOIDAL LENSES.

Raehlmann (*Klinische Monatsblatter für Augenheilkunde*, February, 1898) continues to advocate the use of hyperboloidal lenses for correction of irregular astigmation and keratoconus. A number of cases are cited in which the vision was only slightly or not all improved by the ordinary spherical or cylindrical lenses, but was decidedly improved by hyperboloidal lenses. [Raehlmann, during the past twenty years, has been interested in this subject, and from time to time has written papers giving results of his investigations.—Ed.]

ROENTGEN-RAYS IN OPHTHALMIC SURGERY.

It is a matter of interest to note that, during the past year, considerable advance has been in the practical use of the X-rays in ophthalmic surgery. At the outset it was seen that Röntgen's discovery would be of great value to the general surgeon, but on account of the fact that the eye is so extensively surrounded by

bony walls it was thought that the new photography would not be of much service in locating foreign bodies in the orbital region.

At the last meeting of the American Ophthalmological Society, May, 1897 (*Trans. Am. Oph. Soc.*, 1897), Dr. William Thompson presented a paper, entitled "Removal of Piece of Steel Located by X-Rays from Interior of Eyeball." Position of foreign body was determined by two radiographs taken by Dr. Sweet. Time of exposure in each instance was four minutes. Dr. Sweet then explained in detail to the Society his method of using "indicators" in connection with X-ray apparatus.

Another paper on the same subject was presented by Dr. Oliver, who gave credit to Dr. Leonard for having shown, in three cases, by means of the Röntgen-rays, the location of foreign bodies.

In two patients, the foreign substance was embedded in the orbit outside of the eyeball, and in the third case the piece of steel was found in the interior of the eye.

SYMPATHETIC OPHTHALMITIS.

Cross (*Trans. of the Ophthalmological Society of the United Kingdom*, pp. 300–303, 1897) says that the operation devised by Mules of eviscerating the sclerotic and introducing an artificial vitreous, undoubtedly gives a far better stump for the glass eye than enucleation does; leaves less sinking of the upper lid, and allows it to move more naturally and freely. Recovery after Mules' operation is sometimes tedious, suppuration may occur, or a fistulous opening may remain that cannot be altogether devoid of risk. Many cases have been published where inflammation has set in after excision of the exciting eye; and this complication appears to be entirely due to the condition of the injured eye and not to the operation for its removal. A radical removal of the whole organ would seem to be a safer preventive than the most thorough cleansing out of scleral contents, for evisceration still leaves the veins and lymph-channels in and outside the sclerotic as a possible source of infection.

ETIOLOGY OF PARENCHYMATOUS KERATITIS

Desvaux (*Archives d'Ophthalmologie*, February, 1898) considers hereditary syphilis as one of the most important factors in the etiology of parenchymatous keratitis. But syphilis, either hereditary or acquired, is far from being the only cause of this form of keratitis, for in thirty to fifty per cent. of the cases it is impossible to establish the diagnosis of syphilis. After syphilis,

tuberculosis is one of the most common causes of keratitis. Von Hippel has demonstrated that parenchymatous keratitis can be caused by tubercular infection. In addition to causes already named, malaria, grippe, rheumatism, and rachitis are enumerated. Attention is called to Galezowski's researches which showed that keratitis develops from some form of irritation of the fifth pair of nerves. Mention is made that the so-called Hutchison teeth are not always found even when the diagnosis of hereditary syphilis is well established. Thirty-three cases are cited in which although they were victims of this disease, yet the teeth were quite regular and in perfect condition.

WHEN TO ENUCLEATE IN INJURIES OF THE EYE.

Foster (*Jour. Am. Med. Assoc.*, January 1, 1898), in a paper before the American Medical Association, said that his experience had shown that children under the age of puberty are more prone to sympathetic ophthalmia than at any other period of life. Superficial injuries to the eye, such as are produced by blows with the fist, or a dull instrument causing contusions and bruisings without solution of continuity of the ball itself, while frequently productive of serious or fatal results to vision are in the rarest instances followed by sympathetic affections of the uninjured member. A wound in the ciliary region more often demands enucleation than in any other locality.

Operation is not to be delayed if, in the affected eye, there is excessive pain or indication of purulent inflammation; or if, in the uninjured eye, there is "shyness of light," corneal haziness or discoloration of the iris.

HOLOCAIN AS A LOCAL ANESTHETIC.

Würdemann and Black (*The Ophthalmic Record*, January, 1898), although not enthusiastic over the new anesthetic, yet find the following points in its favor: Action is rapid, anesthesia of cornea in fifteen seconds after instillation of one drop of a one-per-cent. solution. Holocain produces anesthesia of the iris, while cocain is of little service in cases where the tension of the eye is increased, as in glaucoma.

Anesthesia is of longer duration. Tension is not affected. Anesthetizes inflamed surfaces; solutions are antiseptic. Does not dilate the pupil; has no effect upon the accommodation.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

699th Regular Meeting, Tuesday, April 19, 1898.

The President, Dr. Joseph H. Hunt, in the Chair.

There were about 75 members present.

The minutes of the previous meeting were read and approved.

The Secretary stated that the Report of the Delegates to the State Medical Society, prepared by their secretary, Robert J. Morrison, and read by title at the last meeting of the Society, would be found published in full in the May issue of BROOKLYN MEDICAL JOURNAL.

REPORT OF COUNCIL.

The Council reported favorably upon:

Wm. E. Thomas, P. & S., New York, 1895.

Sewall Matheson, L. I. C. H., 1897.

APPLICATIONS FOR MEMBERSHIP.

G. Ashman, 1073 Bergen street, L. I. C. H., 1896. Proposed by J. M. Winfield and Mark Manley.

John L. Waldie, 22 New York avenue, L. I. C. H., 1896. Proposed by J. M. Winfield and Mark Manley.

Horace M. Sloat, 149 Van Buren street, L. I. C. H., 1887. Proposed by Joseph H. Hunt and Geo. A. Williams.

Charles E. Williamson, 211 Van Buren street. Proposed by Joseph H. Hunt and Geo. A. Williams.

B. T. Whitmore, Park Avenue Hotel, New York, St. Louis Med. Coll., 1877; Kentucky Medical College. Proposed by Joseph H. Hunt and R. G. Eccles.

ELECTION OF MEMBERS.

The following having been regularly proposed and favorably acted upon by Council, were declared by the President elected to membership:

William G. Reynolds.

S. E. Moore.

Prosper H. de Gregori.

Israel Kaufman.

Wm. Ellery Jennings.

The President announced that since the last meeting the following gentlemen had consummated their membership:

Clarendon A. Foster,

Charles W. Berry,

P. H. de Gregori,

and that six others had settled with the Treasurer, but had not completed their membership by signing the by-laws.

The President stated that at the last meeting the Entertainment Committee had invited the recently affiliated members of the Society to meet the members of the Council at the residence of the Chairman of the Entertainment Committee for the purpose of getting acquainted with each other; that the attendance had been small, but that the Entertainment Committee would continue such meetings every month or two, with a view of giving the new members an opportunity to become acquainted with Council, and through them with the members of the Society.

The Secretary presented a communication from Howard A. Kelly of Baltimore, in reference to Senate Bill No. 1063, entitled "An Act for the Prevention of Cruelty to Animals." He stated the bill was a death-blow to animal experimentation, and requested the Society to use its influence against the passage of the bill.

The Secretary stated that Council had referred the communication to the Legislative Committee, who had written to the Chairman of the Senate Committee in whose hands the bill now is.

PRESIDENT'S ADDRESS.

The President, Dr. Joseph H. Hunt, presented the annual address.

SCIENTIFIC BUSINESS.

Paper by H. B. Delatour: "The Importance of Rectal Examinations in the Diagnosis of Appendicitis."

Discussed by Drs. Joyce, McNaughton, Chase, and Foster.

Paper by Frank S. Milbury: "The Relation of the General Practitioner to the Rhinologist and Laryngologist in the Treatment of Some Affections of the Nasal Passages and Rhinopharynx."

Discussed by Wm. Schroeder.

REPORT OF THE SECRETARY, HISTORICAL COMMITTEE, MEDICAL SOCIETY OF THE COUNTY OF KINGS.

BROOKLYN, N. Y., April, 1898.

During the year the following members have completed their

life-work among us and have gone to rest, all of whom have been an honor to our profession in this city; three of them have held the honored position of President of this Society.

ON THE ACTIVE LIST.

	Date of Membership	Obiit.
Lucian Theodore Bell, . .	1880.	April 23, 1897.
Cornelius Olcott, . . .	1861.	May 2, 1897.
Edward Seaman Bunker, . .	1871.	June 7, 1897,
Henry Loewenstein, . . .	1876.	June 10, 1897.
John Rendell, ...	1887.	Sept. 16, 1897.
Edward Grether, . . .	1881.	Sept. 22, 1897.
Arnold Stub, ...	1877.	Feb. 1, 1898.
John Terry Conkling, ex-Pres., .	1859.	March 17, 1898.

NON-ACTIVE LIST.

	Date of Membership.	Obiit.
Christopher Lott, . . .	1888–89.	May 10, 1897.
Charles W. Bates, . . .	1863–65.	Aug. 26, 1897.
Theron Tuttle, . . .	1877–83.	Sept. 16, 1897.
William Henry Thayer, ex-Pres.,	1866–93.	Dec. 22, 1897.
Samuel Johnson Osborn, "	1844–62.	Jan. 1, 1898.
William Stone Terry, . .	1893–96.	Mar. 4, 1898.

I have during the year received many favors from different physicians connected with this Society at present, and from those who have been active in years gone by, to all of whom I desire to express my appreciation.

My work in collecting portraits of the ex-presidents of this Society has been continued during the year; the results thus far has been all that could be desired. During our existence as a society we have had forty-seven different presidents, three of whom have held the office at different times, making the present incumbent of that office the fiftieth.

Your committee desires at this time to present the names of the ex-presidents, a portrait of whom has not been secured, with the hope that some member of the Society may know of some one who may have a portrait from which a copy may be made.

Cornelius Low, . . .	President	1822–24.
Joseph Gedney Tarlton Hunt,	"	1825–30.
Charles Ball, . . .	"	1833–34.
Isaac J. Rapelye, . .	"	1835.
Matthew Wendell, . .	"	1836.

Purcell Cooke, . . .	"	1840–41 and 1845.
Bradley Parker, . . .	"	1844.

WILLIAM SCHROEDER, M.D.

OBITUARY: DR. JOSEPH O'DWYER.

Dr. Geo. McNaughton presented an obituary note and large, framed photograph of Dr. O'Dwyer.

On motion, the thanks of the Society were tendered Dr. McNaughton, and the obituary and photograph were ordered published in the BROOKLYN MEDICAL JOURNAL.

The President announced that the Secretary had secured for the Society from the widow of the late Dr. Cornelius Olcott, three large oil paintings, copies of three of the most celebrated paintings in the world, *viz.:* Rembrandt's masterpiece at The Hague, known as "The Anatomist;" the celebrated picture of "Harvey Demonstrating the Circulation of the Blood to Charles I.;" and the copy of "The Anatomist," by Max, the original of which was exhibited at the Centennial Exhibition at Philadelphia. The pictures are now in the possession of the Secretary, and will be transferred to the Society when it has a place to put them.

Dr. R. G. Eccles presented the

REPORT OF THE DELEGATION TO THE NATIONAL PURE-FOOD AND DRUG CONGRESS.

On motion, a vote of thanks was tendered Drs. Eccles and Day for their representation of the Society at this Congress.

There being no further business, on motion, adjourned.

DAVID MYERLE, Secretary.

THE BROOKLYN PATHOLOGICAL SOCIETY.
THE 392ND REGULAR MEETING.

January 13, 1898.

The President, Dr. James P. Warbasse, in the Chair.

The program of the evening was under the charge of Section VIII.: Dr. Joel W. Hyde, Chairman, and Drs. Bennett, Cochran, Fleming, Hall-Brown, Leigh-Jones, Maddren, Murray, Praeger, Santoire, A. J. C. Skene, Thomas, Williams, Ellarson, and Rushmore.

Thirty-one members were present.

SCIENTIFIC BUSINESS.

Paper: "The Isolation of the Typhoid Bacillus by the Medium of His," by Dr. Jerome B. Thomas.

Paper: "The Medical Witness in Court," by Dr. Thomas M. Buckley.

REPORT OF CASES AND PRESENTATION OF SPECIMENS.

Dr. W. J. Brandt presented a case of

ULCERATING NÆVUS OF THE LIP IN A CHILD, PRODUCING HARELIP; SPONTANEOUS CURE.

Dr. Brandt [presenting patient]: This little patient is now twenty-six months old. At her birth a very superficial-looking nævus was observed over the left side of the upper lip, extending from the nose to the vermilion border. Twelve days after birth the nævus became darker, thicker, spreading rapidly, and soon began to involve the mucous surface of the lip; a nodule also appeared on the cutaneous surface of the nose. The nævi of the lip and nose grew daily and the child soon presented a most disagreeable appearance. She was very irritable, although no other symptoms were observable.

Twenty-one days after birth, owing to the nævus becoming softened and sloughy, and child crying, the lip divided and a disgusting, sloughing, acquired harelip resulted. There was no hemorrhage at the time of the separation. The division of the lip extended up to the nasal fossa and was absolute, excepting a thread-like portion of deep tissue close to the nose. This thread of tissue remained and was quite an aid in the subsequent cicatrization and cure. The edges of the harelip were for many weeks ulcerated and sloughy, and the discharge at times was offensive. The edges of the fissure from this time on became very much thickened, a condition which has persisted more or less until the present.

Two months after birth the edges of the fissure became clean and assumed a healthy appearance. From this time on the closure has been fairly rapid and complete, and the cicatrization of the nævus tissue, it is even now apparent, is reducing the fissure more, and also the thickened sides of the fissure back from the part that united. The mother nursed the child until she developed an abscess of the breast; since then the child has been fed with condensed milk. The ulceration of the nævus at the height of the process extended up into the nostrils, close to both sides of the septum nasi, and at times it seemed as if the cartilage could be seen. The only treat-

ment has been an application of the actual cautery to the nodule that was situated on the cutaneous surface of the nose, and to the thickened parts back from the edges of the fissure. The result of this application was very good, the nodule on the nose entirely disappearing.

While the artificial harelip was present the edges of the fissure were kept moistened with olive-oil, and in the beginning, when the discharge from the nose was offensive, the parts were syringed with witch-hazel.

There being no occasion for hurry, I am waiting until Nature stops, as I wish to see how complete an obliteration of the nævus-like tissue will occur.

HYPERTROPHIED KIDNEY, DUE TO STENOSIS OF THE URETER.

Dr. Geo. G. Hopkins: This kidney [presenting specimen] weighed eleven ounces. It was removed six weeks ago from a patient who had suffered intensely from renal colic; so severe as to incapacitate him in his occupation as carpenter. The attacks would come on without any warning and the pain be so intense that it would double him up and he would have to be taken home; he would be completely used up for two or three days thereafter. In this case we expected, of course, to find renal calculi in the pelvis of the kidney, but the pelvis was only dilated, as shown by the specimen, and contained quite an amount of urine. I was not entirely clear about the case, but my final diagnosis was stenosis of the ureter; from what cause, it is impossible to say. The patient made an uninterrupted recovery and was discharged three weeks after operation. The operation was done by the lumbar incision. The attachments were exceedingly short, which made the removal very difficult. I used chromatized catgut for ligature and closed up the wound, leaving in silkworm-gut for drainage, leaving the strands coming out of the upper and lower end of the wound, so that they could be removed gradually, strand by strand, and not cause any disturbance of the wound. These were removed on the second day.

The man had no gonorrheal history, so far as could be learned. He was married and lived in the country, the case having been sent to me by Dr. Hewlett of Babylon. The pain seemed to follow up the line of the ureter.

Dr. Florence Leigh-Jones presented the three following specimens:

CARCINOMA OF THE ILEUM.

For a year previous to operation this patient was troubled with constipation and complained of pain across the lower abdomen, accompanied with great rumbling of gas in the intestine. During this time the patient lost considerable flesh and strength, constipation gradually increasing. The most severe attack of pain took place three days previous to operation, and continued, with some intermission, up to the time of operation; pain accompanied by vomiting; movement day before operation after injection; same treatment on following day had no effect.

Operation by median abdominal incision revealed carcinomatous mass encircling the gut. The portion involved was in the lower part of the ileum. Resection with Murphy button; uneventful recovery. The button has not yet been recovered.

DISCUSSION BY DR. WARBASSE.

It is now three weeks since the operation was done. The patient made an uneventful recovery. Examination with the X-ray failed to reveal the button.

[It was passed by rectum a day or two after the case was reported.—Ed.]

GOITRE.

From childhood this patient has noticed in the right side and anterior aspect of the neck a swelling which has gradually increased in size, giving him no trouble other than a feeling of discomfort from its size. No pressure symptoms other than a slight huskiness of the voice, which has recently been noticed.

Examination showed in the right side of the neck a rather firm, oval swelling about four by two and one-half inches. In the left side of the neck is another swelling, not well defined and causing simply a slight fulness of the neck. Both of these swellings move in the act of swallowing and were evidently the enlarged right and left lobes of the thyroid gland.

An S-shaped incision was made over the tumor in the right side of neck; the right and middle lobes of the thyroid gland were dissected out, with a portion of the left; vessels were found very large; drainage and dressing. The growth was a pure glandular hyperplasia, with no colloid degeneration such as is often found in similar cases.

RUPTURE OF INNOMINATE ARTERY.

This patient was taken to hospital September 4th, having been run over by a wagon, the wheels passing diagonally across the

right side of the chest and neck. He died within a few hours. There were some abrasions of the skin about the body. Autopsy revealed nothing abnormal about the viscera, except some pus found in the bladder. An incision was made along the spinal column; there was a large swelling extending from the sub-occipital region down to the middle of the scapula, which shows, on further examination, extensive infiltration of blood into the tissues; the spinous processes in this region were fractured. Between the axis and third cervical vertebra the transverse processes of the vertebræ are separated, leaving an open space three centimeters in diameter, through which the myel can be felt very distinctly. The separation between the vertebræ is well marked anteriorly, but in less degree; there is considerable hemorrhage into the spinal canal. Further dissection shows rupture of the innominate artery, where it divides to form the right subclavian and carotid. The firm fascia surrounding the large vessels in this region prevented the further escape of blood and caused the infiltration above mentioned. Immediately distad of the thyroid axis the subclavian artery is diminished to half its usual diameter, and its lumen completely occluded by a firm cylindrical clot filling the vessel for two inches, thus accounting for the absence of pulse in the right arm, noted before death.

BROOKLYN SURGICAL SOCIETY.

Regular Meeting, February 3, 1898.

H. B. Delatour, M.D., President, in the Chair.

A USEFUL ARM FOLLOWING EXCISION OF THE ELBOW-JOINT.

Dr. Alexander Rae said the object in bringing this case was to show the exceptional result in the usefulness of an arm in which excision of the elbow was done last October. It was a case of tubercular disease in the joint and ends of the bones, set up by a slight traumatism which the elbow received in the month of April preceding. It had proceeded so far by August following that it had been opened and treated, and was finally brought into the hospital into the service of Dr. Wight, and at last came to an excision of the ends of the three bones at the joint. The excision was not made as extensive or as thorough as the indications would seem to call for, in view of the fact that to shorten the bones would leave a disabled arm. So that the subsequent care of the

case was one which had exerted a great deal of interest, and in consequence of which a good deal of care and attention devolved upon the speaker. The necrotic areas called for individual treatment, and one after another was finally made to heal by careful treatment. The excision took place in the latter part of October, 1896. The patient was in the hospital until about the first of April, 1897. She went from the hospital back to her duties as a school teacher almost hopeless that she would be able to use the arm at all. But being urged to do it and being a woman of a good deal of spirit, she went back and has been doing regular duty, blackboard writing, etc., with this arm, to her complete satisfaction. The speaker added that while there was not much motion at the elbow-joint, the usefulness of the arm had been so great that it has been felt wise not to get any further motion at the elbow, but to leave it as it is and not take the chance of setting up any further trouble by undue motion. More motion might be secured but he could not see that it would be advisable while the usefulness was so great as it is.

GENERAL RELAXATION OF PERI-ARTICULAR LIGAMENTS.

Dr. J. M. Clayland presented a boy of Scandinavian parentage, born in this country. He had a complication of abnormalities. He came to St. Mary's Hospital first for his clubfeet. He had been operated upon at another hospital in this city by the open Phelps' operation without good result. At St. Mary's Hospital this opening was again made, and the same foot operated upon. After the foot was put up it was found that the circulation stopped, and it was finally allowed to relapse, partly in order to keep up the circulation.

The joints of this boy were almost as lax as that of a gentleman who travels about the country making his living by exhibiting himself to medical societies and colleges. In the first place, his collar-bone on the left side was entirely dislocated from the sternal end. The right side was abnormally movable. The speaker had seen his shoulder-joints dislocated, but when trying it to-day he failed to dislocate it without using considerable force. One elbow-joint seemed to be all right; in the other one the head of the radius is loose, though it does not entirely dislocate. His spine presented some lateral curvature. There was a congenital dislocation of both hips. The knee-joints could be dislocated, which dislocation the lad could easily reduce by his own muscular action.

DOUBLE DISLOCATION OF THE HIP.

Dr. J. M. Clayland also presented a case of double dislocation of the hip-joints. He had tried on this case the bloodless operation. After first pulling the head of the femur down on the level with the acetabulum and making some pressure there and rotating and at the same time abducting the thigh, getting it down to ninety-five degrees, he put it up in plaster of Paris which extended down to the knee. He put a high shoe on the other foot and had the child walk. The patient learned to walk very nicely. It was three months in this first plaster, and at the end of that time it was taken down and the head seemed to be in good position, and another plaster was put on which was worn three months more. At the end of six months it was taken off and the child walked for a short time and then the displacement was just as bad as it was in the first place. Nothing had been gained by the treatment. The speaker said that Lawrence claims to have very good results, but this case is surely not improved. Whatever the trouble was that the bone did not remain in place he could not say, but it seemed to be replaced, to all appearance it went into the socket; and the sound which Lawrence speaks of was very distinctly heard. But at the present time the child is in just the same condition as he was before the operation. At the end of three months, when the second plaster was put on, the amount of abduction and flexion was reduced; it was put up more nearly in the natural position. It is a singular thing that, whereas, nine-tenths of the cases of dislocation of the hip occur in girls, these two cases are both boys.

HYSTERO-OOPHORECTOMY.

Dr. George Wackerhagen presented a specimen of uterus and appendages with the following history: Mrs. F., aged thirty-six years, mother of two children, youngest ten years of age. Menstruation was delayed until she was seventeen years old. It was painful, very irregular, and small in quantity. Two years after marriage she miscarried at the fifth month. Some time after this curettage was performed and her general and local conditions improved.

After the birth of her second child, ten years ago, she suffered from metrorrhagia, general abdominal pains, and great tenderness from time to time in the region of both tubes and ovaries. The greater part of this period she had been under treatment. During each year she has had two or three attacks of local peritonitis, followed by great exhaustion. Recovery from the intense suffer-

ing was always preceded by a profuse discharge of pus from the uterus into the vagina. When she came under his care her general health was much impaired. She suffered from neuralgia and severe attacks of dyspepsia. There was a loss of appetite, general physical and mental exhaustion. She had been under treatment elsewhere for dilatation of the stomach. On the 8th of last May she went through another attack of pelvic peritonitis, with rapid, feeble pulse, and high temperature. This attack, also, terminated with considerable discharge of pus from the uterus. Her recovery was followed by great exhaustion. He had proposed operative measures before this, but was opposed, for the reason that it was thought her illness having existed for so long a period, and the adhesions necessarily being so extensive, an operation would prove fatal. At this time, however, Mrs. F. readily consented to his advice, stating that she preferred death rather than experience another severe attack of the disease. Operation, June 10th. An effort was made to remove the diseased organs per vaginam, but it was found that adhesions between the uterus and bladder, in fact, everywhere, were so extensive that it was impossible to proceed further in that direction, and the patient was then placed in the Trendelenburg posture and the usual abdominal incision made, uterus and appendages exposed. There was a mass of adhesions to the bladder, intestines, and pelvic walls. The diseased organs were separated after considerable difficulty and removed, heavy silk being used for the broad ligaments and catgut for ligating adhesions and smaller blood-vessels. The oozing after separation of adhesions from the pelvic wall was so great that after cleansing and drying as much as possible the greater part of the pelvic cavity was packed with iodoform and plain sterilized gauze, the ends being carried out through the vagina with the large silk sutures. The operation having been much prolonged it was found necessary to inject normal salt solution with whisky, also, strychnia hypodermically. At its termination the patient was in collapse. Temperature, 97° F.; pulse feeble, 130. She rallied, however, during the second hour; pulse, 100; temperature, 99.4° F. Alcoholic stimulation and strychnin were moderately continued. On the second night after the operation, at 11 P.M., she became again very feeble, although the temperature was only about 100.4° F.; the pulse, which was feeble, suddenly increased to 172 by 12 o'clock. With increased stimulation and hot saline-solution injections, the pulse decreased to 150, then to 110, and the temperature to 100° F. by 4 A.M. From this

time recovery was gradual, but uninterrupted. Highest temperature 102° F. on third day. Highest frequency of pulse 172 on second day. Packing from vagina was first removed on the seventh day and reapplied; that from pelvis on thirteenth day. Silk-worm sutures removed from abdominal walls on the fourth week. Patient was discharged from hospital on the twenty-seventh day after the operation and has made a complete recovery.

The uterus is about one inch longer and somewhat broader than normal, its anteroposterior measurements being not out of the way. There is considerable atrophy at the junction of the cervix and corpus, it being especially pronounced on the posterior aspect of the organ. The metrium seems firm but is rather pale as compared to a normal structure. The cavity of the uterus is enlarged, the right Fallopian tube contains about one dram of cheesy material which, by microscopic examination, is seen to be composed of broken-down pus cells. The orifice at the uterine end of the tube is enlarged. The left ovary is four times its normal size and in an advanced state of parenchymatous and interstitial changes. Blood-vessels are all dilated. There are ovarian cystomata near the outer surface of the organ.

CALCULUS FROM SUBMAXILLARY GLAND.

Dr. H. B. Delatour presented a specimen of calculus from submaxillary gland, with the following history: A young lady of thirty years of age suffered for eighteen months from passage of pus from the submaxillary gland. A quantity of pus could be forced out through an opening beneath the tongue. The speaker slit up the duct back to the gland, and with a finger in the mouth this calculus could be distinctly felt. The gland was badly broken down and was entirely removed, and in the posterior and outer portion of the gland was found this calculus. The operation was done through the mouth.

CALCULUS REMOVED FROM THE BLADDER OF A CHILD.

Dr. W. C. Wood presented a stone, weighing 140 grains, which he had removed from the bladder of a girl six years of age. He showed the stone because he was unable to find that the methods for operating in little girls have been very much formulated. In this case there were typical symptoms of cystitis and stone. Children under thirteen years of age are very apt to have incontinence of urine if the urethra is dilated sufficiently to do a crushing. The question of taking out such a stone through the bladder wall arose. The bladder seemed much contracted, and the stone

very adherent, therefore, he did not select the vaginal route for fear of injuring the ureters. He did a suprapubic operation, and the calculus came out with more difficulty than he had expected. The wound was not closed at all on account of septic condition of the bladder. The child made a very good recovery, being out of bed in two weeks.

A paper, entitled "Ligatures and Sutures," was read by Dr. Thos. B. Spence. [See elsewhere.]

BROOKLYN GYNECOLOGICAL SOCIETY.

Stated Meeting, February 4, 1898.

The President, Dr. J. C. MacEvitt, in the chair.

The were nine members present.

The minutes of the January meeting were read and approved.

PRESENTATION OF SPECIMENS.

Dr. Wm. H. Skene: Mr. President I should like to present two specimens which I have here, both removed from the same patient.

One, a parovarian cyst I removed from the left side, the other a pus-tube from the right side.

Two years ago the patient began to complain of pain in both ovarian regions, and for the past eight months has been confined to her room, being unable to take any exercise.

I operated a few days ago and the patient is doing very well. The tube measures 8 inches in length and 6 inches in circumference.

Dr. H. P. de Forest: Mr. President, I cannot help congratulating Dr. Skene on such an altogether unusual specimen. In the last five years it has been my fortune to see several hundred specimens of pus-tubes and I do not think I have ever seen one so cleanly dissected and one which is so typical an example of this pathologic condition.

Dr. L. Grant Baldwin: Mr. President, I want also to congratulate Dr. Skene on the removal of this specimen. It emphasizes or should emphasize a point which still needs to be dwelt upon, and that is that pus-tubes do not drain through the uterus. Even with the enormous distension that is present in this tube, the uterine end of the tube is almost impervious, and I think we should not lose an opportunity to harp on that old string a little bit—that they are practically closed at the uterine end; that you

cannot distend any tube until you do close both ends of that tube. I believe this is the largest pus-tube ever removed.

The President (Dr. J. C. MacEvitt): The largest I have ever seen, Doctor. What drains through the uterus is the discharge from the endometrium resembling pus, it does not come from the tube at all. I agree with you in the statement that the uterine end is universally closed. There is a possiblity of its not being, but it is one of the rare possibilities.

Dr. Geo. McNaughton: I have seen this condition twice. Pus from a distended Fallopian tube did drain through the uterus, as was proved by washing out the uterus first and afterward making pressure over the tube and causing its contents to discharge into the uterus; subsequent examination of the tube after its removal showed a sufficient caliber for the pus to pass through. It is rare but it may occur. Of course it cannot be cured by curetting the uterus.

The President: I admitted that it is possible, but that it is extremely rare.

NARRATION OF CASES.

Dr. McNaughton: If no one else has a case to relate, I would like to ask the advice of the members about a patient at the Kings County Hospital who was seen in the observation ward, which is the ward where people of doubtful mentality are placed when they come into the hospital and kept there for observation to ascertain if they are insane. Attention was called to her the other day.

She is about 30 years old; has had six children and three or four miscarriages, which she has induced, and about six months ago she began to show queer symptoms coming on a few days before menstruation; in each menstruation these symptoms have become worse until at the last one she was maniacal, and for that reason was placed in the hospital for observation.

The family history is all straight except her mother, who after an accident became insane and died in that condition. I find in examining this woman she has two large ovaries, probably cystic, and with it a retroflexed uterus. Remembering that she is perfectly straight mentally excepting one week preceding menstruation, and that this symptom has recurred for six months, is this a proper case to place under surgical treatment; should she be operated on? I propose, if I do anything, to curette the uterus, open these cysts—if they are cysts of the ovary—and replace the uterus by ventral suspension.

I would like to ask the advice of the meeting in a case of that sort. They occasionally come before us for treatment. I would say that I would prefer not to remove both of her ovaries with such a shaky history, unless those organs are greatly degenerated.

DISCUSSION.

Dr. Frank Baldwin: I related a case here some months since of a patient who had most persistent hallucinations which began at pregnancy and disappeared at the close of pregnancy; but later on her health became somewhat affected and they again persisted. I discovered as her health began to fail she was suffering from a somewhat aggravated form of endometritis, and twice I have curetted the uterus. Just so long as the endometritis remains away and the uterus is in a healthy condition, her mind is clear and she improves in general conditon; but just so soon as that returns—I have not been able to keep it away for any great length of time—just as soon as that begins, her mind becomes affected and she imagines all sort of things and persists in the idea that there is a living animal of some kind in or about her heart.

Dr. Kortright: If I might advise, Mr. President, I certainly should advise operation in Dr. McNaughton's case. Here is a woman who after her injury became insane and died insane; here is her daughter who with disordered pelvic organs commences to shows the same symptoms occurring at the time when these organs are functionating. I think the Doctor would be justified in going even further than he proposes and if it were my own case I should rather want the menopause induced. She certainly would not be any worse, and she might possibly do better.

Dr. L. Grant Baldwin: I think I agree with the last speaker in the main. Certainly if she has diseased ovaries they ought to be treated. The fact that she becomes maniacal at her menstrual period should not prevent her from receiving the best possible medical care. Certainly if she has a displaced uterus, that is enough to interfere with her nervous system to a great extent, and if not the real cause, may be the predisposing cause of her mania. If the ovaries are such as it would be justifiable to remove under other conditions, I should say it would be most proper to remove them.

Dr. McNaughton: I think if she has a fair amount of good ovarian tissue left it is better to leave them, for I believe their removal in this case would be a good deal of shock to her. Here is a woman in the height of her menstrual life and I think it

would be very much less of a shock to leave a portion if she has healthy ovaries, and subsequently if need be she could have them removed without much trouble.

In connection with what Dr Frank Baldwin says, I am reminded of what was told me the other night by a doctor from London, Ontario, who is gynecologist in an insane asylum in that city. He has done a good deal of work among the insane, and he says he finds that in insane women the lesion that does most harm and disturbs them most is the lesion in the endometrium, and not in the ovaries; and that confirms what Dr. Baldwin says about his case.

The President: I think the experience of Dr. Baldwin and Dr. Kortright is the experience of us all. There is no doubt of the existence of some mental affection with divergence of the axis of uterus, and in the particular case you refer to, while I do not go so far as to agree with Dr. Kortright in advising removal of the ovaries, I would first endeavor to restore the uterus to its normal axis with dilatation and curettage; find out the effect produced by this and if not satisfactory, feel justified in doing a laparotomy and expelling or removing such portion of the ovaries as are diseased; but it would be well in my opinion, to correct the malposition of the uterus first. I have a case in the hospital now almost similar to the one related by Dr. Baldwin, with the exception that the change in the axis is a very acute anteflexion. She is a dressmaker by occupation, one who in the last two years has grown so emaciated as to be almost a walking skeleton, and preceding and during the flow there is this condition of epileptiform convulsions, sometimes almost resembling catalepsy. I operated five weeks ago in the hospital; simply dilating, curetting, and packing. Her last menstrual epoch passed without any appearance of this form of convulsions or other symptoms that existed with the previous menstrual epochs for the past two years.

The President: Perhaps there is a connection between the fact of the mother being insane and the daughter being in this condition; but the mother was insane as the result of accident simply, and I do not see what the connection is.

Dr. Kortright: It shows they both have unstable nervous systems.

Dr. H. P. de Forest: I would like to report a case of craniotomy. The patient was one of a physician who lives in the southern part of the city. She is 30 years of age and of Irish parentage. Her first child was born after an instrumental delivery three

years ago, lived half an hour and died—I could not learn the particulars nor the cause of death. Her second child was born a year later, and was also delivered by forceps. She was taken in labor with her third child at 8 o'clock in the morning and went into the second stage after twelve hours. The family physician came at 8 P.M. and stayed until midnight. At that time he decided to use forceps and sent for another physician. For some three hours efforts were made to deliver by forceps and failed; the head remained at the pelvic brim and did not descend at all. The family physician had had a hard day and told the gentleman whom he had called to get other assistance and he would go home, which he did. The second physician asked me to see the case with him, and I reached the bedside at about five o'clock in the morning.

I found the woman having extremely violent pains about every three minutes; the external pelvic measurements were half an inch above the normal in all directions: Interspinous, 25.00; intercristal, 36.00; external conjugate, 26.00; right oblique, 23.00; left oblique, 23.00; diagonal conjugate, 10.50; true conjugate, 9.00; there was no evidence at all of any pelvic deformity. Examination showed that the cervix was fully dilated but the head still remained obstinately at the pelvic brim and in the L. O. A. position. No fetal heart sounds could be heard. When told over the telephone that the two physicians had tried to deliver with forceps for three hours and failed, I thought there was very little use of my trying forceps, so at a venture I put my basiotribe in my satchel and took that with me. I did try the forceps, however—the high-forceps operation—the blades were thrice applied but each time slipped posteriorly, and although considerable traction was used the head did not advance. Then I thought I would try version. I accordingly introduced my hand into the vagina and partly into the uterus, the procedure thus far being done with considerable ease, but now I found a large tumor mass apparently of an osseous nature situated just above the sacral promontory which blocked up the pelvic brim and constricted the diameter so I could not succeed in getting my hand past the promontory of the sacrum. This explained the delay in advance for the head was held above and to the left of this impediment. I could not reach either foot but I succeeded in getting hold of the cord, and found no pulsation. Inasmuch as the child was dead it did not seem that symphysiotomy was indicated, but rather that the child should be removed as quickly as possible. Pressure was made by the doctor upon

the fundus and I perforated the head with the Tarnier basiotribe, and crushed the skull after allowing the broken up brain to exude. After a very prolonged and difficult traction I then succeeded in getting the head partially into the pelvic basin. There was no longer any advance, and I put my hand in and removed the bones of the head piecemeal to avoid lacerating the vagina. The shoulders then came down a little ways and then did not advance. Finally I wished to improvise an ecraseur with fine wire passed up around one shoulder and held by means of a stout cord, the cord broke but I succeeded in delivering one arm. Even then the child would not be born, and finally I got a clothesline from the yard and working it well up in the vagina, tied it around the baby's neck, which was the only thing left to hang on to. Then by means of steady and still more powerful traction with the clothesline I succeeded in delivering the child.

To tell of these various procedures takes but little time, but the actual occurrence was a different matter. Forceps were first applied at 8.00 A.M., and discontinued at 8.20. After the effort at version the basiotribe was used, beginning at 8.40. The child was finally delivered at 9.40. Chloroform was given to the obstetric degree for 100 minutes, and for the greater part of this time was pushed to the surgical degree. She bore the anesthetic well and recovered speedily from its effects.

After the birth of the child the uterus was held and given gentle massage for fifteen minutes. Good contractions occurred from time to time but the placenta was not expelled. After waiting twenty minutes I again introduced my hand into the uterine cavity and found the placenta quite separated, but obstructed as the child had been, at the pelvic brim; it was extracted manually, and the membrane and placenta were found complete.

There was but slight loss of blood, but on account of the protracted manipulation I gave a hot intrauterine douche of a gallon of boiled water, 1–5000 bichlorid, at a temperature of 118°, and repeated this after ten minutes to remove all clots. A teaspoonful of ergot was then given and the uterus held for an hour after the birth of the child. It contracted well. The perineum and adjacent soft parts were entirely uninjured. There was a slight old and healed laceration.

The child was a male, weighing 8 pounds and 9 ounces after the bulk of the head had been removed, so that it probably weighed about 10 pounds. It was 59 cm. long and the shoulder circumference was 42 cm. The suboccipitofrontal diameter was

10 cm. The other measurements could not of course be determined. The funis was deeply stained with green, the scrotum was purple, and there was some little exfoliation of the epidermis on pressure; the child had therefore been dead for sometime before labor began. There were a few marginal infarctions of the placenta, but no other evident pathologic condition.

Subsequent history of the case as related by the family physician is as follows: "On the same afternoon she said she felt first-rate. Her bowels moved normally and without a laxative on the next day and regularly thereafter. The lochia was normal and at no time had an offensive odor. On the third day there was a slight engorgement of the breasts; these were supported and snugly bandaged and gave no further trouble. At this time her temperature reached 99.2° for one day, the highest during the entire puerperium. There were no symptoms referable to the bladder. Altogether the puerperium was absolutely uneventful, and at the end of ten days she was up and about." Considering the fact that this woman lived in a tenement-house where there were no conveniences except a cook-stove and some hot water this result is gratifying.

The President: This case is most interesting on account of the difficulties met with and overcome successfully.

Dr. L. Grant Baldwin: This case illustrates to me one point, and that is that in all cases of dystocia continuing beyond the ordinary time, that the proper thing to do is to put the hand into the uterus and determine the cause. I don't know how it is at present time, but certainly a few years ago vaginal examinations were spoken against to such an extent that a great many have become afraid to make any examination at all, and allow many women, together with the child, as this one did, to run the chance of losing their life and but for the extremely skilful care of Dr. DeForest his patient would have died.

JOSEPH O'DWYER, M.D.

HISTORICAL DEPARTMENT.

JOSEPH O'DWYER, M.D.

Dr. Joseph O'Dwyer was born in Cleveland, Ohio, October 12, 1841, and died in New York, January 7, 1898. He graduated at the College of Physicians and Surgeons, New York, in 1866. At the time of his death he was a member of the Medical Society of the County of New York, New York Academy of Medicine, professor of the diseases of children in the New York Post-Graduate School and Hospital; consulting physician to the Willard Parker Hospital, and visiting physician to St. Vincent's Hospital and to the New York Foundling Hospital.

In 1880 he began his work in connection with his method of intubing the larynx: from that time he labored incessantly, patiently overcoming one obstacle after another, and, it may be added, almost secretly, so retiring were his habits of life until 1885, when his first article appeared in the *New York Medical Journal.* It is to be noted that no improvement has been made in his method or instruments since they were given to the world. In other words, up to this time, his method and instruments may be regarded as perfect; this fact is probably without a parallel in the history of medicine.

His method was opposed as being unsurgical and less desirable in every way than the old operation for the relief of similar conditions. Dr. O'Dwyer's only reply in defense was that he had proved that the larynx would tolerate a metal tube, and that it would relieve dyspnea in croup. He asked only that it be tried and he would be satisfied with the verdict either for or against. This man was great enough to desire the truth only. The O'Dwyer operation has won its way and is now practised in every part of the civilized world, and has taken its proper place "as one of the great advances in medical discovery." His cup of satisfaction must have been more than full, as he doubtless many times has witnessed the most intense expressions of gratitude from mothers whose children were, almost like magic, relieved of the awful distress of suffocation.

Joseph O'Dwyer was a devout Christian, patient yet firm, humane yet progressive, honest, modest, and grand in character, an example to emulate.

George McNaughton, M.D.

THOMAS TURNER, M.D.

Dr. Turner was born in the City of Belfast. Ireland, August 18, 1822, and in his early childhood came to this country with his parents, who settled in Chester, Delaware County, Pa. He was a bright, precocious boy, fond of books, and serious beyond his years. He began the study of medicine with the family physician, Jesse Young, M.D., and entered the University of Pennsylvania, where he graduated in 1850. He began practice in his adopted County, and was physician to the Delaware County Hospital for one about year, when he removed to Flatbush, Long Island, to become assistant physician to Dr. D. Tilden Brown, whom he succeeded as resident physician, on the appointment of Dr. Brown to the position of physician to the Bloomingdale Asylum in 1851. Dr. Turner retained this position of resident physician to Flatbush Hospital until 1865, when he resigned from ill health, returning to his father's home in Chester, where he died March 12, 1865, of phthisis, brought on by overwork, bad air, and want of proper exercise. Physically Dr. Turner was short of stature, rather delicate in figure, with cold gray eyes, an undemonstrative manner toward those with whom he was not well acquainted, but warm-hearted and sympathetic both with his friends and with the poor and suffering. He was studious in his habits, devoting much time to anatomy and pathology. He was an expert microscopist, a good botanist, an enthusiastic photographer, and a Free Mason. He hated pretense and sham with all his heart, but was fond of a joke, and himself quick at repartée, often exposing the foibles of those with whom he came in contact by a witty story or naïve remark. As a physician he had few superiors, was most painstaking in his diagnosis, often surprising those who called him in consultation with his rapidity in arriving, almost unerringly, at a correct decision. He seemed to recognize the true nature of the case by a kind of intuitive knowledge, acquired by long experience and careful observation, and, though sceptical in regard to the effect of drugs, he did not hesitate to use heroic means if the case seemed to require them. As a surgeon, he operated with care and discrimination, his profound anatomical knowledge lending certainty to his operations. Surgery, however, was not his favorite field in medicine. His temperament made him rather shrink from causing suffering and pain. For this reason he allowed his assistants, whom he held to be competent, to operate on such cases as needed surgical treatment

THOMAS TURNER, M.D.

in their several wards, but always under his supervision. In fact every patient coming into the hospital was first sent to what was called the "Receiving Ward" and then examined by Dr. Turner himself, who afterward transferred the case to its appropriate ward and the assistant physician who had that ward in charge was notified, and proper treatment suggested, if it was thought of sufficient importance. Dr. Turner was a decided advocate of a generous diet in the hospital. He thought it more economical for the County—for thereby the period of convalescence was considerably shortened. He also advocated the giving of moderate stimulation to the hopelessly sick and dying on the ground of humanity.

The Kings County Hospital grew out of the needs of the County Almshouse which was removed to Flatbush in the year 1832.

The Almshouse was the general receptacle for the County's poor, idiotic, insane, and criminal paupers. But as their number increased it was impossible to house so many and diversified people together, and different buildings adapted to each class were erected, first the old asylum, second the hospital, third the penitentiary, and finally the nursery for the children.

Dr. John B. Zabriskie was the first physician to the old Almshouse. Drs. Ingraham and Wyatt succeeded him after his death, and they were succeeded in the new hospital by Dr. D. Tilden Brown, who was as we have already said Dr. Turner's predecessor. The hospital was not entirely finished till 1852. During the fourteen years of Dr. Turner's service there were probably fifty or more assistants under him, many of whom have since become eminent in the profession, and their after success was in large measure due to the high ideals and noble example given them by their chief.

HOMER L. BARTLETT,
Chairman of Historical Committee.

MISCELLANEOUS.

DENVER MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

At the last meeting of the New York County Medical Association a committee on transportation was appointed to arrange for a Greater New York special train to the Denver meeting of the American Medical Association.

All physicians and their friends of the City of New York and vicinity going to the meeting are specially invited to join the regular association special-train party. They will find it to their advantage both socially and financially.

Those who have attended the National meetings at a great distance can attest the advantages of going in good company and in large numbers. They point out, as of incalculable importance, the preliminary introductions, the personal contact, the social intercourse, the interchange of sentiment, opinion, and experience, and finally, the opportune appreciation of the personality of those interested. Thus prepared, en route, one enters more fully into a keen appreciation of the routine of work and enjoyment during the period of the meeting. With these advantages before him who would go alone?

The most satisfactory arrangements are being made, and special information will be forwarded to all who communicate with the chairman, or any member of the committee.

J. J. E. Maher, M.D., Chairman,
34 West Twenty-fifth street.
Dr. A. E. Gallant, Secretary,
60 West Fifty-sixth street.
Dr. F. H. Wiggin,
55 West Thirty-sixth street.
Dr. L. Fischer,
187 Second avenue.
Dr. W. R. L. Dalton,
477 West 145th street.
Committee.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

TRANSACTIONS OF THE ROYAL ACADEMY OF MEDICINE IN IRELAND. Edited by John B. Story, M.B., F.R.C.S., General Secretary. Vol. XV., 8vo., pp. 480. Dublin: Fannin & Co., 1897.

In the year 1887 the then existing medical, surgical, obstetrical, and pathological societies were merged into one, and to this new organization was given the name of "The Royal Academy of Medicine in Ireland." Provision was at once made to publish from time to time, the papers of the society, and the fifteenth volume of these "Transactions" is now at hand.

In June the society "was honored by an address from Professor His of Leipsic." This is appropriately placed as the opening paper, and is published in full. The subject chosen was "The Development of the Brain," and, as might be expected, is a concise and scientific summary of our present knowledge upon this subject. It is well illustrated by original photographs of specimens and by diagrams.

The remainder of the volume is a compilation of the papers that have been prepared for the various sections of medicine, surgery, obstetrics, pathology, State medicine, and anatomy-physiology. It is a difficult matter to particularize where the general standard of excellence is high, but for physicians on this side of the Atlantic there are some articles of more value than others.

"Dilatation in Diseases of the Stomach," by Dr. M. A. Boyd; "Intestinal Anastomosis by Means of Rings of Decalcified Bone," by Dr. C. R. Ball; "Clinical Pictures of Children's Diseases," by Dr. Langford Symes, and "Backward Dislocation of the Sternal End of the Clavicle," by Dr. E. H. Bennett, are especially noteworthy articles.

The first article in the section devoted to State medicine is the "Report of the Vaccination Commission, 1895." This report should be given a wide circulation, and should be especially read by those persons who mask their ignorance of the subject behind the statement that "they have honest objections to the procedure."

The closing paper, by Dr. A. F. Dixon, is devoted to a demonstration of some early human ova, and is a fitting supplement to the article by Professor His to which attention has already been directed.

The academy is to be congratulated upon the completion of so successful a year. HENRY P. DE FOREST, Brooklyn.

OUTLINES OF RURAL HYGIENE FOR PHYSICIANS, STUDENTS, AND SANITARIANS. By Harvey B. Bashore, M.D., Inspector for the State Board of Health of Pennsylvania. With an appendix

on the Normal Distribution of Chlorin. By Professor Herbert E. Smith of Yale University. Illustrated. Philadelphia, New York, Chicago: The F. A. Davis Co., 1897. Pp. 84; price, 75 cents, net.

This little book is a most excellent one and admirably fulfils the purpose for which it is written, namely, to aid in the diffusion of sanitary knowledge where it is, perhaps, needed more than anywhere else, *i.e.*, in rural districts. We should advise every one who passes the summer in the country to take a copy of the "Outlines" with him and do missionary work. The results would be most salutary and far-reaching. Dr. Bashore makes no attempt to supplant text-books on hygiene, but he recognizes that in the larger and more elaborate treatises rural districts and their sanitary wants have not received the attention they need and deserve.

Lexique-Formularie des Nouveautes Medicales et Biologiques, Etc. Par le Professeur Paul Lefert. Paris Librairie. J. B. Baillère et Fils; 1898.

In this little volume, the author claims, will be found terms employed in medicine and biology, which are scattered through scientific books and journals, which are not contained in the most recent dictionaries; terms which are increasing in number daily and whose meaning is not clear from the text in which they are found. Those who read French will find it of assistance in their reading.

The Psychical Correlation of Religious Emotion and Sexual Desire. By Jos. Wier, Jr. Published by the author.

"Religion and Lust" is the author's sub-title to the above, which is the first essay in the collection making up the book. He is an evolutionist and not a deist, and his writings throughout are tinctured with these doctrines. Beginning with solar worship he next describes phallic worship, and explains the condition of the title as being "Kept in the innermost recesses of our subliminal consciousness till favoring circumstances (of time, place, and environment) allow them to appear in our outward (active) consciousness." The other essays are about hypnotism, sexual perversion, and degeneration, ad hoc genus homo, and are made up of extracts from, and better described by, Lombroso and Kraft-Ebing.

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

ENTERED AT BROOKLYN, N. Y. POST OFFICE AS SECOND CLASS MATTER.

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VOL. XII. No. 7. WHOLE No. 127. | BROOKLYN, N. Y., JULY, 1898. | Single copies 25 cents $2 a year, in advance

ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

COMPLICATIONS AFFECTING THE NERVOUS SYSTEM IN THE TREATMENT OF TYPHOID FEVER.

BY W. H. HAYNES, M.D.,
Brooklyn, N. Y.

At this time I think we are all agreed that typhoid fever is due to the introduction of the toxin produced by the Eberth bacillus, which may or may not be a modification of the colon bacillus, and that while we have no antitoxin to counteract the effects of the poison, some antiseptic plan of treatment, such as the Woodbridge; Pepper, nitrate of silver; Burney-Yeo's, chlorin water; Homeopathic, sulphate of copper; salophen, or other, is the best plan of treatment, with or without the Brand bath, or some modification of it as occasion may require.

As a result of these improved methods of treatment the number of recoveries has very much increased, so that the rate of mortality at present is now less than ten per cent. of the whole number of cases, and, in consequence, we meet with a greater number and different kinds of complications during the course of the disease and its convalescence, as we do in diphtheria since the introduction of the antitoxin plan of treatment for that

disease, especially of the nervous and circulatory systems, about some of which I will now say a few words.

In the first place, it is not my intention to discuss the early nervous symptoms, such as severe headache, delirium, stupor, and general prostration of the early and middle periods of the disease, and which are due to the general systemic poisoning and part of the general syndrome helping to make the diagnosis of the disease, and combatted by the means employed in the general treatment of this affection, but to those particular lesions affecting the circulatory and nervous systems met with at the commencement of and during the progress of the convalescence. The first and simplest of these that I shall speak of are those pathological sensations termed "paresthesias," which are a disturbance of sensibility, causing a feeling of numbness, deadness, and coldness in particular spots and localities, usually of the extremities, very annoying at times, and such as are also complained of in other conditions of nerve tire or disturbed nerve function, due to a state of auto-infection and blood impoverishment, and consequent malnutrition of the whole system. In the complaint of which we are speaking, and in the convalescing stage of the disease, it is generally due to the fatigue and exhaustion consequent to the diseased action, and is cured by attention to the general state of the patient.

The next most frequent nervous complication met with is "peripheral neuritis," either simply by itself or combined with a phlebitis, as is also met with in an analogous condition after parturition, due to infection, and resulting in a form of "milk leg." In fact, all these conditions which we are now mentioning are met with in all the infectious diseases, but of more or less prominence, according to the relative frequency in which these infectious conditions occur, typhoid fever simply being one of the most frequent.

Peripheral neuritis due to this infection occurs most frequently in one of the lower extremities, causing what is termed a "monoplegia," met frequently in both lower extremities, causing "paraplegia," occasionally in the upper extremities, and, finally, all the extremities, as in the condition termed "multiple neuritis" and "diplegia." It is extremely rare for any of the cranial nerves to become affected by this poison, and when it does occur it is usually those of some special sense, as the auditory and optic nerves; as, for instance, of late, isolated cases of "optic neuritis" have been reported as occurring in the course of this disease, particularly at

one of the congresses lately held, in which there was a thorough discussion of the nature and course of typhoid fever. Peripheral neuritis due to this cause is not so severe or lasting as in those forms following other systemic poisonings, such as alcohol, the mineral poisons, or diphtheria; its stages not so marked, and is more amenable to treatment. It usually begins with pains, tenderness, and hyperesthesia along the course of the principal nerves of the one or more extremity involved; for instance, and most commonly, severe pain is complained of in the calf of the leg, hips, and foot, increased on moving the limb, marked tenderness on pressure anywhere along the course of the sciatic nerve and its branches, but especially at the classical-pain points, namely, behind the external malleolus, back of the condyles and great trochanter of the femur, and through the rectum against the sacrum at its origin from the sacral plexus of nerves, with hyperesthesias, then paresthesias, and lastly, anesthesias after subsidence of the pain, together with more or less loss of motion, either entire inability to move the limb, or simply dragging of the leg in walking, impaired circulation causing a cold bluish mottling of the surface, more or less atrophy, seldom foot-drop, with weakened or total loss of reflexes. The treatment of this condition in the acute painful stage consists of rest and anodynes, together with mild counter-irritation by the use of warm applications or cold (ice-bag), whichever is most conducive to the patient's comfort, and splints. On the subsidence of this comparatively short stage of the complaint in these cases, substituting warmth by the use of flannels and hot-water bag, stimulating embrocations, hot and cold douches, electricity, tonics, stimulants, and good nourishment, with encouragement to use the limb, and the prevention of contractions and distortions. This plan of treatment thoroughly persisted in usually results in a cure unless the affection is of an ascending character or complicated by a myelitis, both of which, however, are extremely rare, when there will result a permanent atrophy and loss of function, with contractions and spasticity, due to the latter affections.

The next condition of the nervous system found complicating typhoid fever is that causing "hemiplegia," and which has only been prominently brought to the notice of the profession in the last few years, notably by Dr. Osler of Johns Hopkins, Baltimore, in 1896, and whereas the other nervous conditions usually occur during or after the deflorescence of the

fever, this complication can occur at any time from the second week onward to the tenth (cases so reported), and at any age, both in severe and mild cases, and appears suddenly with or without a convulsion; that is, the disease may be pursuing a regular and satisfactory course when the patient is noticed to have a general convulsion, followed by the hemiplegia, or it is simply noticed by the attendant that the patient does not move the arm and leg of one side, mouth is drawn, and if aphasic, that they are unable to make themselves understood. The condition is due to the formation of a thrombus in the middle cerebral artery following the dehydration and poisoning of the blood, together with a weakened circulation, and, indeed, is sometimes more extensive, involving other vessels of the brain, causing profound coma, septicemia, and death. If the process is limited to the vessels supplying the motor area of the brain, and recovery is to ensue after an interval of a few weeks, and the subsidence of the fever as the patient gradually recovers health and strength, it will be noticed that the movements are slowly and gradually returning, usually and better, first in the lower limb, then in the upper, and returning power of speech, all of which, of course, can be assisted by the help of friction, massage, douching, and electricity, besides stimulants and proper nourishments, carbonate of ammonia, and iodid of potash; but be careful not to promise too perfect a cure, for, as a rule, there will not be perfect recovery, but a condition permanently remaining of more or less atrophy, spasticity, contracture, paresis, athetosis, and even epilepsy.

This completes the list of localized nervous lesions complicating typhoid fever, and there remains the consideration of mental conditions following this complaint, and the two most common are mania and melancholia.

Suddenly during an apparent happy convalescence from this disease there will occur a sudden excitation in the manner of the patient, who will become restless, want to get out of bed, have delusions of sight and hearing, be suspicious, refuse food and attendance, facial expression disturbed, eyes bright and suffused, surface of body by turns cold and hot, pulse weak and rapid, tongue coated, breath foul, urine probably apparently normal, but on inquiry and examination the large intestines will be found impacted with hardened feces, and the patient's symptoms really due to a form of virulent auto-infection due to constipation and excessive feeding, allowing the development of leucomain poisons such as

xanthin, paraxanthin, hypoxanthin, and such-like bodies, as shown by an increase of indican in the urine and a lowered quantity of the combined sulphates. The removal of the determining cause: namely, the impacted fecal matters by enemas and cathartics, followed by proper feeding and intestinal disinfectants, as salol or naphthol, will result in a cure. The other mental condition, melancholia, particularly met with in children, may be due to the same cause or to the deteriorated blood state, or both combined, in which case the patient is apathetic, listless, and dull, pays no attention to those about them does not speak, surface cool, pulse weak but regular, no appetite, makes no requests, lies in an apparent stupor, with coated tongue and offensive breath. If on investigation the colon is in proper condition and there is no auto-infection, stimulants, tonics, and forced feeding, with time will usually result in a cure.

It is curious to notice how seldom this or other of the infectious diseases are assigned as a cause of that common, so-called functional, disorder, namely, epilepsy.

THE MEDICAL WITNESS IN COURT.

BY THOMAS M. BUCKLEY, M.D.

"The Medical Witness in Court" is the title of this paper, although, perhaps, it would have been better to say "The Medical Man in Court," as the medical man appears in court in about three rôles, *viz.*: 1st. The medical man when endeavoring to collect his just dues. 2nd. The medical man endeavoring to exonerate himself from a charge of malpractice. 3rd. The medical expert.

It is understood that the duties of a physician are such as require him to answer calls and render services at all times and under difficulties, that it is in fact indelicate and even impossible for him to investigate and determine who is going to recompense him for his services; this being the state of affairs it frequently happens that the medical man takes great chances of getting nothing for his services, owing to the lack of being able to determine the legal responsibility.

The legal questions at issue and the way they are disposed of are manifestly interesting; for convenience, however, we will only discuss the question of the responsibility of a private person who sends for the physician to attend some one else, and which has lately

been decided by the courts that such a person is not responsible to the physician for such services rendered. The point usually to be decided is whether the person so ordering the physician acted for himself, or as an agent for the patient. We naturally take the view in an honest way that one or the other will pay. As the law states, it is a general principle of the law of agency, that one who procures services to be done for another is not himself chargeable as the debtor, unless he omits to make known his principal, or erroneously supposes that he has authority, or agrees to be responsible, or promises to pay when bill is rendered, or by doing or saying something which justifies the person who is to perform the services in supposing that the one who applies to him engages to pay for them, though there is an apparent exception to this rule, making the person receiving the services liable for them—is that of a person who requests the service for those whom he is under some legal obligation to support or care for, such as a husband, or the father of minor children.

The cases illustrative of these points would be instructive; one which I will cite occurred recently to a member of the profession in New York and, one which we are all probably familiar with, as most of the facts have been already published. In this case the doctor was not only sent for by the defendant, but repeatedly called by her in person for extra visits, when the bill amounting to $191 was rendered to the defendant, she being the adult sister, and head of the household, paying all the household expenses, servants, nurses, etc. There was no denial of the propriety of the bill when first presented, only a request for time in which to pay it, the defendant making some trivial excuse each time to the collector. When the case finally came to court, the defence was that at the time the services was rendered, the defendant, the lessee of the house and mistress of the household, lacked six months of being twenty-one years of age, and was not responsible.

The defence of infancy was probably an afterthought. The decision of the court, however, was in favor of the defendant, though the judge expressed his regret that the law rendered impossibe the collection of an admittedly just claim, stating that it was the physician's duty to ascertain very definitely in each case where a minor was treated that such adult guardian was not only of age, but also a resident of the State.

There was a case in Pennsylvania in which the request of a physician to render medical services was made by the father, he using the following words: "Doctor, you must come, I am

afraid my son will die," and as a natural sequence the doctor sent the bill to the father, who refused to pay; hence the suit. When the case came up for trial it appeared by the testimony that the son was thirty-two years of age and in business for himself. The judge held that this request raised no implied promise on the part of the father to pay for the physician's services; in other words the court held the rule to be the same as though the father was a perfect stranger. It was said a different principle would be very pernicious, as but very few would be willing to run the risk of calling in the aid of a physician, where the patient was a stranger, or of doubtful ability to pay.

While writing up this paper a case came under my observation, iu which, in a recent action to recover for professional services rendered, it was held that one who requests a physician to render medical services to another, without revealing the fact that he acted as messenger, should be liable for the payment of such services. In this case it appears from the evidence, that the defendant was a son of the patient [since deceased]; called upon the doctor and said, "Doctor I want you to come and attend my father." The doctor went promptly, and rendered the services for which amount the suit was brought to recover from the defendant; the defendant claimed that it should be brought against the estate, and if the estate did not pay, he would see it paid, and it was on these facts that the court gave the plaintiff a verdict, which was appealed from; but on reviewing the appeal, Justice McAdam said, "we think the testimony sufficient to warrant the findings, it being proven that the son acted on his own behalf and not as a messenger."

Again there are many conditions of professional life in which the medical man may become a defendant, either justly or falsely accused. Unavoidable deformities and disabilities remaining after the treatment of fractures and dislocations have been made the most frequent occasions for arraignment of the surgeon.

At various times and in different medical bodies, this question of malpractice suits has elicited attention. In 1856 the Chairman on Surgery of the State of Ohio Medical Association stated that the subject of malpractice was at that time of more importance than any other connected with medicine and surgery, and we may safely say that evil is but little diminished at the present day.

To cite a case, Mr. J. C. B——, age forty-eight, then in good health, but corpulent, was injured by the upsetting of his wagon, falling off his box, as was believed, upon his thigh. He was

carried into a hotel, and there attended to by two physicians. After a careful and complete examination, by measuring, etc., they concluded that Mr. B. had only received a severe bruise. He remained two weeks under their care and was taken home in a bed. Four weeks after the accident the doctors were again called in, as the leg was now said to be shortened and turned out. On examination they found the leg in the following condition: Shortened an inch and a half; the toes turned out, and could not be turned in; the left heel corresponding to the hollow of the right foot; a bunch in the groin, like the head of the femur. They decided that it was a dislocation of the head of the femur upon the pubes, and with pulleys properly adjusted and carefully operated upon, proceeded to attempt its reduction. After two or three minutes extension and counter extension, a sound was heard, and a sensation felt by those who were assisting, which resembled the sound and sensation usually produced when a dislocation is reduced. The patient was now released from the pulleys, and made to get up. The limb was of its original length, and in its natural position, and the tumor in the groin had disappeared. The patient was again laid upon the bed, and dismissed as cured. It, however, appeared in the testimony, that a few days afterwards it was again shortened and turned out; but it does not appear that these facts came to the knowledge of the defendants. It also appeared that the plaintiff did not get the use of his limb so as to be able to dispense with crutches or a cane for two years. The limb is now shortened an inch and a half, and moderately turned over; but the motions of the joint are free, and the patient walks with a very slight halt and without inconvenience.

About three years after this, the doctors were sued, but the jury having disagreed, it was again tried about seven months later. In the first trial the plaintiff charged that the limb was sound when the defendant took hold of it with the pulleys, and that they then fractured it through the neck and without the capsule. In the last trial this was not claimed; but it was alleged that the original accident was probably a fracture without the capsule, and without displacement; that when examined by the doctors, a displacement had occurred, and that the defendants were chargeable with criminal negligence or ignorance in not discovering that it was a fracture; and consequently for subjecting the plaintiff to the useless pain of extension with the pulleys, and in not applying subsequently a retentive apparatus, since, by this omission, the plaintiff had a shortened and crooked leg.

On the defence, it was admitted that the original accident was a fracture, without displacement; but that it was within the capsule, and near the head of the bone; that its being within the capsule, and near the head, could alone satisfactorily account for the bunch in the groin, which disappeared with the reduction, and for the slowness of the subsequent restoration of the limb. It was claimed also, that the signs described by the witnesses were the ordinary signs of dislocation upon the pubes, and would be likely to deceive the most skilled surgeon; that several eminent surgeons had mistaken fractures of the thigh for dislocations; that the extension with the pulleys did him no permanent harm; that the subsequent treatment pursued by the patient in this case, *viz.* keeping his bed for a few days, and getting about on crutches, would have been the proper treatment had the exact nature of the accident been known; and, finally, that the patient had as good a limb as can ordinarily be expected in this fracture, under the most skilful management.

The examination of the numerous witnesses having closed and the counsel having addressed the jury, the judge followed with a most pungent and impressive charge, in which the jury were instructed to disregard all mere appeals to their prejudices, and especially to reject that counsel which would advise them to look upon the medical profession as an oppressive and aristocratic monopoly, and to decide the case upon the facts, as drawn from the witnesses upon the stand.

The jury retired, and in a few minutes returned a verdict for the defendants.

AMERICAN LARYNGOLOGICAL SOCIETY.

The American Laryngological Society held its Annual Meeting in Brooklyn, on May 16th, 17th, and 18th. Under the direction of its efficient president, Professor Thomas R. French, M.D., the program was pronounced, by those competent to express an opinion, to be one of the best ever presented, and the meeting as a whole, one of the most successful ever held. The equipment of the Polhemus Memorial Clinic was placed at the disposal of the Society, and the afternoon spent there was most profitable and interesting. It is doubtful whether the equipment for laryngological work possessed by the Clinic has its equal in this country or abroad.

LIGATURES AND SUTURES.

BY THOMAS B. SPENCE, M.D.,
Assistant Surgeon to the Methodist Episcopal Hospital; Clinical Assistant to the New York Polyclinic.

Read before the Brooklyn Surgical Society.

On a question of vital concern to every one who deals with wounds it would be impossible to say much that is new; but, because of this universal interest, it may not be unprofitable to ascertain the present attitude of the surgical world toward a subject which must ever remain of paramount importance and which must, I fear, still be agitated for many years to come. So long as perfection has not been attained attempts will be made to obtain new inventions and to devise simpler and better methods, and since ligatures and sutures cannot yet be said to have reached that state of excellence some improvements are doubtless to be looked for in the future. Many controversies, too, must be anticipated in regard to the minor details, but a great revolution can hardly be expected since nearly every material that can be fashioned into the shape of a cord has been used as a suture or ligature or for the purposes of both.

It is a well-attested fact that the use of ligatures for the control of hemorrhage was known many hundreds of years before it became a popular method of surgeons. Rufus of Ephesus, who lived during the First Century, is said to have been acquainted with their use; Celsus credits an obscure physician of the Alexandrian school with their discovery, and Galen mentions them in his writings. But this simple appliance, which was known at the beginning of the Christian era and which was to figure so prominently in the later history of surgery, was lost by desuetude for fifteen hundred years.

It was not until the middle of the Sixteenth Century that the ligature was again resorted to, and that was a time when to depart from the ways of the fathers and masters was considered a crime, a time when a change, however valuable it might prove, was thought to be the work of the devil, a time when one's contemporaries bitterly fought progress in any line. Paré may not have been the first to conceive of the ligature but he had the courage

and the fortitude to voice his convictions in this and in other matters and to act them, too, in the face of the strongest opposition. It is pleasing to know that his efforts were appreciated and rewarded during his lifetime, although his colleagues did all in their power to set his work at naught.

While the ligature was very greatly in advance of the cruel and barbarous cautery and is justly considered the beginning of modern surgery, it had some serious defects in the hands of Paré and his followers. Secondary hemorrhage was the bugbear that haunted the surgeon after every operation, and we of to-day cannot appreciate his pitiable helplessness and anxiety during the after-care of his case.

For three hundred years little improvement was made on the method of Paré. He allowed both ends of the ligature to hang out of the wound, but it was afterward found to be of some advantage to cut one end short and thus get rid of nearly half the foreign material.

In 1814 Mr. Lawrence first employed buried ligatures of fine silk and closed his wounds. This method, however, was not accepted and the surgeons of that time continued to use the ligature of Paré. Dr. Physick of Philadelphia was the first to employ animal ligatures made from deer-skin, chamois, and catgut. McDowell tied the pedicle in his ovariotomy cases and closed the wounds. So also did Nathan Smith in 1829. John Bellinger in 1835, and others after them.

Joseph Lister tried buried ligatures and soon after the date of his first experiments in 1868 the plan of leaving the ends of ligatures long to facilitate their future removal was practically abandoned. He used twisted strips of peritoneum from the small intestines of the ox and fine catgut, both treated with a watery solution of carbolic acid. After ligation of an artery with these, the wound was completely closed and it promptly healed. At the post-mortem examination thirty days later only a slender thread of cellular tissue was found at the site of each ligature. Lister remarked: "It appears that by applying a ligature of animal tissue antiseptically upon an artery, whether tightly or gently, we virtually surround it with a ring of living tissue and strengthen the vessel where we obstruct it." Stephen Smith, commenting upon this, said: "To one who has been familiar with the painful anxiety with which the earlier surgeons watched their cases, especially at the period of the separation of the ligature, such language will seem preposterous. But fortunately it is true. We

have reached the happy era of surgery, when to ligate an artery means to strengthen it at the point of ligation. We can ask no more. The improvement in the ligation of arteries reaches its consummation in perfection."

It would be pleasing indeed if this important subject could thus be dismissed for ever with words of the most extravagant praise, but the question of asepsis makes it a living issue still. The large number of methods for preparing catgut and the numerous attempts that have been made to substitute other materials for it would seem to prove that perfection has not yet been reached, that there is still a field for investigation. Lister's views in regard to the anatomical changes which are effected by the ligature are probably to some extent erroneous. It is well known that scar tissue is weaker than normal tissue and the fibrous cord which takes the place of the ligated artery is undoubtedly weaker than the artery itself. Be that as it may, the artery remains strong enough to perform its function and, under the ordinary conditions, secondary hemorrhage is not to be feared. The question is an interesting one, however, since another surgeon has more recently made similar claims for the animal suture.

While many materials have at various times been employed as ligatures, at the present time the choice lies between but two, silk and catgut. They both possess to a high degree the qualities of a perfect ligature, efficiency and safety. Both have tensile strength and a high index of elasticity. Both are pliable and can be easily and securely tied. Both can be sterilized, but silk has the advantage in this particular, as the methods for its preparation are much the simpler. Catgut exerts pressure a sufficient length of time to be efficient, as it is well known that pressure for a few minutes stops bleeding from the smaller vessels and pressure for forty-eight hours at the most is all that is needed to occlude larger vessels, such as the uterine arteries. It certainly can be of no advantage to use material that remains on the vessels for a much greater length of time. Catgut is safe since the tissues readily dispose of it, and herein lies the chief advantage it possesses over silk, which becomes encysted and, if absorbed at all, disappears only after many months. Non-absorbable ligatures frequently come to the surface by ulceration or as part of the contents of abscess formation. Even if they become encysted they may give rise to local irritation and cause pain and discomfort which cannot be relieved except by their removal. The so-called neuralgia of ovarian stumps is undoubtedly an affection

frequently traceable to the foreign bodies left in the tissues at the time of operation. As a matter of fact, silk for the ligation of arteries has practically become obsolete except in abdominal surgery where it is still used by many operators.

Binnie justly remarks: "Why should a distinction be drawn between the abdomen and any other region? In tying the pedicle when removing an ovarian tumor, why should we use thick silk? The reasons are:

"1st. It has tensile strength.

"2nd. Its thickness prevents cutting when the necessary force is used.

"But catgut of a thickness sufficient to avoid cutting the tissues when force is used in its application has sufficient tensile strength to withstand the strain of the force applied to it, and if we trust this material in the cases of a femoral artery surely we may trust it here also and use it, seeing it has the undoubted advantage of disappearing when once it has served its purpose. It appears to me that the virtues of silk have been unduly exalted. When it is firmly applied round a pedicle the pressure which it exerts must necessarily, within a very short time, cause pressure necrosis and so the included parts be no longer constricted, the silk remaining encapsulated as a foreign body which often gives rise to trouble at a subsequent date."

The truth of these assertions cannot be questioned, and yet many surgeons will say that, while the advantages of catgut are undeniable, there is one disadvantage that offsets them all when the pedicles of abdominal tumors are to be ligated, and that is the difficulty and uncertainty of sterilizing large-sized catgut. Its first preparation by maceration in water is necessarily a dirty process and the gut always becomes impregnated with myriads of germs during the procedure. These germs are often sufficiently protected, when rolled up in the middle of a large cord, to resist all attempts at sterilization. It was with these facts in view that Fowler tried braided catgut ligatures. Small catgut, which can be readily asepticized, is braided to form the heavier strands, and a large experience with these ligatures has shown them to be reliable, safe, and in every way satisfactory.

It seems to me that catgut will yet add a little more to its popularity as ligature material and thus witness the downfall of the last of its rivals.

Inquiry into the present status of sutures discloses the fact that this subject is still in its experimental stage. Nearly every opera-

tor has changed his views somewhat during the last five years and yet we have hardly come any nearer a common standard.

Material for sutures is sought for from widely different sources and is at present chosen from the mineral, vegetable, and animal kingdoms. From the first-class silver wire alone is used. Marion Sims made the prediction that the introduction of the silver suture would prove to be the greatest achievement in the surgery of the Nineteenth Century. How far short of the prophesied enviable height silver has fallen we are now in a position to observe. Extravagant claims are still made for it by some operators, more especially as a buried suture in the closing of abdominal wounds. The same objections hold here that obtain in the case of non-absorbable ligatures. Foreign bodies which have been left in the tissues will at times cause trouble, either by coming to the surface or by causing pain and discomfort even if they remain buried. Such a suture, by constantly dragging on muscular or aponeurotic structures, will surely bring about atrophy of the tissues enclosed within its bight, and that result shows the permanent suture to be not only useless after a certain length of time but actually harmful. In surgery of the bones silver wire is still found to be useful; but here also it is in danger of setting up necrosis and is gradually being displaced by its most formidable rival, the absorbable animal suture, which is nearly always as efficient and always safer.

From the vegetable kingdom linen thread is obtained. Its use is rather restricted, just why I do not know. It has most of the good qualities of silk and is much cheaper, but in finer work, such as intestinal surgery, it would be found lacking. As a subcuticular suture it has no equal, since it necessary roughness is a material aid in holding the edges of the skin in coaptation.

Animal sutures may be divided into two classes, the non-absorbable and the absorbable. In the first class are silk, silkworm gut, and horse-hair. These all have their special uses, and the first two at least are practically indispensable to the surgeon.

Silk has always been the favorite material in intestinal work, because the strength of the finer strands renders delicate and at the same time reliable suturing possible. It is also useful in closing wounds of the skin and mucous membrane and makes a satisfactory subcuticular suture.

Silkworm gut is probably the most popular suture material that is at present known. Its great strength, its smoothness, the ease with which it can be sterilized, and the slight amount of irri-

tation it causes in the tissues, all combine to make it almost ideal. It has been employed most extensively in the closing of abdominial wounds and when inserted after the method of Fowler as a crossed suture it cannot be surpassed for this purpose. The bringing together in nice apposition of the different layers of the abdominal wall, especially the peritoneal and fascial layers, is considered of the utmost importance. No buried suture can possibly effect this more satisfactorily than the crossed suture, which can be removed at the surgeon's pleasure, while the buried suture must remain in the tissues permanently or become absorbed after a period of time not under control of the surgeon. The crossed suture is also to be recommended in plastic operations on the perineum and in all wounds where deeper layers must be brought together in order to avoid spaces which would allow the collection of exudate. The addition of a subcuticular suture completes a most satisfactory method of closing wounds.

Horse-hair has long been in use as a suture material and is to be recommended for superficial wounds where little tension is needed. Its cheapness is a point in its favor and ambulance and dispensary surgeons find it reliable in the minor work that falls to their care.

The absorbable animal sutures have occupied a prominent place in the recent surgical literature and the best known among them are catgut and kangaroo tendon. Marcy was the first to use buried absorbable sutures in 1870 and has been a warm advocate of them since that time. He employed catgut in a herniotomy and was gratified with the result. The difficulties in making catgut sterile and the defects because of the necessary twisting in its manufacture caused him to look about for a safer and more reliable material. After trying various animal tendons he settled upon the tendons from the tail of the kangaroo as the best fitted for the purpose. The preliminary preparation of tendon is a comparatively clean process, while the preparation of catgut depends on the growth of germs. The fibers of tendons are parallel to one another, while those of catgut are twisted to form a cord, and when these twisted fibers become moistened in the wound there is a tendency for them to straighten out again and thus render the pressure faulty and not as the operator had intended.

Ordinary catgut is absorbed too rapidly to be relied upon for closing certain wounds, and for that reason it is often treated with a hardening reagent, chromic acid being most frequently employed.

It is difficult or impossible to control the time necessary for absorption and chromic gut often proves irritating in a wound and is the cause of suppuration. It is used extensively in the plastic operations on the vagina and cervix and can certainly be recommended in that work.

Marcy's reports of cases in which kangaroo tendon was used are flattering, but in the hands of many operators, when prepared by Marcy's method of soaking in carbolized oil, the tendon has been far from satisfactory because it has not been thoroughly asepticized. Boiling in alcohol is a surer means of sterilization, and there seems to be no reason why the bichlorid-of-mercury method or the formalin method should not meet with equally as good success here as in the preparation of catgut.

Marcy claims that new connective tissue takes the place of the tendon as it becomes absorbed and that a permanent living suture is thus formed which never ceases to exert an influence toward holding the tissues together. Without doubt such a line of new tissue has been found and perhaps it may always be found if the aid of the microscope is invoked; but that it is of sufficient strength to have a lasting value seems to me extremely improbable. I recently had an opportunity of inspecting a refracture of the patella in a case where I had used kangaroo tendon at the first operation about three months before. Bony union had been complete and the result was most satisfactory, but a diligent search for any trace of the sutures was unrewarded. A microscope might have revealed their track, but microscopic sutures can hardly be expected to find a place in the surgeon's armamentarium.

The absorbable sutures are not suited to closing the wounds of the skin, since the germs in the deeper skin layers are not destroyed by any process of preparation yet invented, and they find a most excellent nidus for their growth and reproduction in the softened animal material.

The so-called living sutures should be mentioned in this connection. These are obtained from the wound itself and have the advantage of being absolutely aseptic without going through a process of sterilization. Ribbons of fascia, or of peritoneum, or the urachus are stripped up and are used to close the different layers of the wound. Whether these strips do remain as living tissue, or are disposed of in the same way as the absorbable animal sutures are, is not known; nor does this point seem to be of great importance, since a careful layer to layer approximation by

means of any reliable suture effectually guards against subsequent hernia.

With this somewhat conflicting testimony at hand relative to absorbable and non-absorbable sutures, it would be difficult to arrive at a fair conclusion and to render a just and impartial verdict. Every operator must judge from his own experience, and it seems probable that there will be many and various opinions for years to come. I believe that absorbable sutures should not be used where infection is present or suspected; that absorbable sutures should never be used in the skin; that catgut is not safe if large strands must be used or if a large quantity of any size is needed; that, with the exception of the finest silk, non-absorbable sutures should not be buried; that silkworm gut will continue to be the suture of choice of most of our surgeons, and is the most universally applicable material now known.

DISCUSSION.

Dr. J. P. Warbasse said, that with regard to the use of silver wire as a suture material, his conclusions had been somewhat different from those arrived at by the reader of the paper. He knew of no suture material for the application of a running subcuticular suture, particularly in the abdomen, which gives more perfect results than fine silver wire. The experience of Dr. Spence he knew had been in favor of the linen suture for subcuticular purposes; and it is certainly a very acceptable suture. But it had seemed to the speaker that the advantage of a fine silver-wire suture for this purpose lies in the greater rigidity of the wire, it is often necessary in using a silk suture in this way to fix the ends. This is usully done by holding it until it becomes fixed to the skin by the drying of a little blood or by touching the ends with collodion. But with the silver suture, if it is drawn out tightly and straightened out under the skin, the most perfect apposition is secured. And in those cases in which he had used the silver-wire suture it had seemed to him that there had been less irritation in the track of this suture than in the track of the silk. The only objection to the suture is, that, because of the little angulation which will occur in wire, it has to remain in place longer than the thread suture before it can be drawn out. He had seen cases in which it had to remain two and one-half weeks before it could be drawn out.

At a recent meeting of this society the question of buried materials was discussed, and Dr. Bristow called attention to the fact

that the action of the normal salts of the body upon silver results in the formation of a mild antiseptic product, so that in case any bacteria are buried with the suture we have in the silver wire an antiseptic in the suture itself, whereas in the twisted thread sutures we have a culture medium. It seemed to the speaker that while discussing the suture question, this matter of the subcuticular suture should be dwelt upon, for he believed that here is a method of closing wounds which is used too little by surgeons, particularly in cases in which as little scar as possible is desired. For cosmetic effect, he knew of no suture which gives such beautiful results as the subcuticular suture. He had only recently seen some cases of small operations about the face which he had done two and three months ago, and in which at the end of that time no scar is evident at all. And this is something which could not be accomplished by the old method of suturing through the skin itself. And these were cases in which subcutaneous injection of cocain was done for the purpose of anesthesia, which makes a perfect healing even less certain than when general anesthesia is employed. The speaker believed that this subcutaneous suture is a most valuable one and one which shortly will be used much more than it is at the present time.

Dr. W. C. Wood said, that he agreed with the views of the writer of the paper because he had been very much influenced by the "Brooklyn School of Surgery." But last night discussing the matter with one of the staff of the Roosevelt Hospital, he was told that they use the subcuticular suture not at all. They use a continuous suture including simply, or as nearly as possible, the outer layers of the skin. They use no kangaroo, but rely for buried suture upon catgut. That is true of abdominal sections and hernia cases. The sutures through the abdominal wound are not placed layer to layer in many cases, but simply a large suture is put in including the bulk of the abdominal muscles and fascia, and occasionally a suture that includes the upper muscular layer with the skin. He mentioned this to show the great variance among surgeons as to their methods, and it seems impossible to convince people who have been doing one method successfully of the superiority of other methods.

Dr. B. O'Connor said that he had been associated with Dr. Bull of New York in four abdominal cases, and had talked with him in regard to suture material. According to his own statement, he and his assistants in his service at the Hospital for Ruptured and Crippled, probably do more herniotomies than any other

man in New York. Dr. Bull said he had absolutely discarded silver wire and used kangaroo tendon (sterilized by himself) exclusively, and had had very satisfactory results. Concerning silkworm gut, the objection raised was that it was rather stiff and also sometimes hard to see on account of its color. Dr. Bull has been staining it by a process that may be of interest. He had been in the habit of soaking the silkworm gut for half an hour in a solution of sulphate of iron and then transferring it to an aqueous solution of hematoxylon, then washing in sterilized water and immersing for half an hour in 1 to 1000 bichlorid; it then comes out coal black, and very pliable indeed, and he has had very good results in its use.

Dr. L. S. Pilcher said that a simple and hence a better way to color silkworm gut than the method detailed by Dr. O'Connor was to simply leave on the red string colored with aniline dye, with which the skin of strands is tied up, as it is found in the strips and put the whole thing in water with a little carbolic acid for the purpose of disinfecting it. In a short time the silkworm gut will be colored a very beautiful dark red color, just as distinguishable as if it was black, answering every purpose therefore without subjecting the operator to all of the detail of the complicated process described.

Of course in the matter of suture material every man will have his own peculiar preferences, arising very largely, first from his experience, and second, from his prejudices. What men do after they really get into work, in the selection of materials and methods depends very largely upon these two elements. In the beginning, of course, men are influenced largely by the way they are taught, but later they are influenced by the double conditions of what their experience has been and by that peculiar combination of mental processes which may perhaps be well styled "prejudices." Some men are never satisfied unless they can find something that is different from that which other men have, or something which has the element of novelty about it, or something which demands some peculiar method of preparation or some complicated process in connection with which there is supposed to attach to the procedure or the substance special merit. He was confident that many things which had engaged the attention of surgeons, many materials which they had been induced to use, had been commended to them largely through such influences rather than from any special merit which they themselves had intrinsically. He asked whether the tendency of the present

time, and the highest and best interests of surgery were not to be found in the simplification of technic. The very word "kangaroo" tendon is in itself a violation of the cardinal tenet. It is absurd to suggest that surgeons should depend for their ordinary suture material upon the comparatively scarce and with difficulty obtained material that is to be found in the tail of an animal in the Antipodes. If for no other reason, it seemed to him that the surgeon should resolutely set his face against the adoption of such a material and should strenuously strive to secure a material which was to be found more closely at hand and more universally accessible.

When catgut was introduced into surgical use as a thread for whatever purposes a thread should be needed, the man who introduced it builded wisely. As time has gone on the experience of the surgical world has been more and more toward its adoption for general use, rather than to any new material which have been suggested to supplant it. Its disadvantages are known; but its disadvantages may be overcome, and at present there is no question but that, with proper precaution, it can be used as safely, that it can be relied upon it as certainly, as substances which have been suggested to take its place. He would go a little further than Dr. Spence had gone in his paper, and say that it is difficult to conceive of the condition in which it would be necessary to resort to either a strand of catgut so thick that its sterilization throughout its whole substance would be difficult or that it would be necessary under any circumstances to braid together several strands and thus have a complicated ligature apparatus. He would suggest that in all those cases where there was such a thick mass as that a moderate-sized thread could not be trusted to ligate it, that it would be better to split up the mass that was to be ligated rather than to use the heavier suture. And except in rare cases it would be found comparatively easy to separate a mass of tissue into fasciculi small enough to be ligated with a cord of small caliber rather than to take a large mass and tie it with an assortment of cords braided together.

Any one who is doing complicated operations will find special conditions in which, according to his judgment, various materials will best answer the need of the particular case. There will be conditions in which the silver wire will be called for; conditions in which a silk thread will be indicated, and other conditions in which the silkworm gut will be better, and ditto for catgut, and he is the wise surgeon who has them all at his command, and

who, taking his judgment as to the particular conditions which are presented to him, will choose the one best adapted to the particular case. The thing for surgeons to do is to study the qualities of these different agents and then, having them prepared so that they shall not introduce in any case the element of infection into it. They may pass on with a confident step into the various operative conditions which they may have to deal with, using in each case the special material which is peculiarly well adapted for the particular condition.

He illustrated this thought by two recent cases which have been under his care: First, an ordinary case of hernia in which, after the sac has been enucleated and the anatomical elements presented, properly dissected and exposed when the sac is cut away there is presented an opening in the peritoneal cavity of perhaps an inch and a half or two inches in length, which is first to be closed with a moderate-sized catgut thread, the ordinary catgut thread; applied as a running suture until the peritoneal cavity is shut off. There are next the aponeurotic and muscular layers to be sutured for the purpose of strengthening the abdominal wall. Now, a rather small-sized chromicized gut thread should be used, which has the quality of remaining unabsorbed for a period varying from fourteen to twenty days, during which time it remains unirritating and supporting the parts in apposition, and at the end of which time and when the parts have become thoroughly adherent and the bond of union becomes organized it has been absorbed and has disappeared. Then in the superficial fascia of varying thickness which is to be closed over this, a running layer of small-sized ordinary catgut is applied. Now, there is left simply the wound in the integument, which is superficial, tends but little to gape and needs simply a subcuticular suture either of common silk or silver wire as may be chosen by the operator for its secure closure. The result will be a wound which heals with hardly any scar, an union which may be relied upon to secure a permanent closure and a permanently strong abdominal wall.

Take also a case of complete rupture of the perineum, where there is a rectal mucosa to be sutured, and there is a vaginal wound to be closed. In such a case as that if the rectal mucosa is brought together with a line of suturing of moderately fine catgut, if the muscular and fascial tissues are brought together and are secured with buried chromicized gut sutures, if the vaginal wound has has a line of suture of ordinary catgut, and if to the

perineal wound there is applied the interrupted silk suture, there will be presented a condition that will most certainly secure a prompt healing of the wound and will be borne with the least discomfort by the patient. The same principles applied in the various kinds of wounds should lead one not to throw aside any kind of suture material that may be presented, but rather to choose for the particular condition what is best adapted to that special condition.

He thought that the disinfection of catgut could be secured with positiveness, for the large experience of many operators by different methods at the present time warrants the statement that it can be reliably disinfected.

Is silk thread or silver wire to be preferred for buried sutures? It seems to him that the almost universal experience of surgeons shows that in a very considerable portion of the cases they do ultimately produce irritation and are a source of great disadvantage in the history of the patient, and that the same results could be obtained in the use of a proper size of chromicized catgut.

Dr. H. B. Delatour said, that he had tried the method of suturing described by Dr. Wood as done at Roosevelt Hospital, in passing the silk suture only partly through the skin, and had been well satisfied that it is not as satisfactory in his hands as the subcuticular suture. It is not as easy to get out, and does not give any better line of union, and the chances of infection from the skin are greater.

As between silver wire, linen thread, and silk for subcuticular suture either linen thread or silk is to be chosen. The silk is more easlly introduced; it is certainly more easily withdrawn than the silver wire. He had never seen a case of marked irritation about it, and as for having to fix it down with collodion or something else, he had never had to do it. He was well satisfied that with either the linen thread, cotton thread, or silk, the result will be better than with silver wire. The antiseptic power of the silver must certainly come to an end at some time, if it does have such a power, for we have all seen silver wire set up a persistent and long-continued irritation.

Dr. T. B. Spence said that he did not prefer silk for subcuticular suturing, but that he used linen thread for the reason that it is a little rough and holds better. Silkworm gut may be colored with the aniline dyes, but he could hardly see the force of the argument. White, he thought, was good enough.

NITROUS OXID AS AN ANESTHETIC FOR SURGICAL WORK.

BY W. B. BRINSMADE, M.D.

Read before the Brooklyn Surgical Society.

Nitrous oxid was first prepared by Priestly in 1772. It was investigated in 1800 by Sir Humphrey Davy and its use for surgical operations suggested by him. It was used in 1844 by Horace Wells, an American dentist, for surgical anesthesia. Its use was revived in 1863 by Dr. Colton for the extraction of teeth.

Nitrous oxid is a colorless, transparent gas, with a peculiar sweetish taste and odor. It is wholly devoid of irritant properties. Liquefaction takes place under a pressure of thirty atmospheres. Manufacturers supply the gas in liquid form in iron or steel cylinders. Fifteen ounces of the liquid furnish about fifty gallons of the gas. It can be kept when in the liquid form for an indefinite time. It is to this substance as a surgical anesthetic that I desire to call your attention. There is very little, that is new, to say, but I hope to show that nitrous oxid is the safest anesthetic we have, and that its use is especially indicated in many cases.

The subject for operation should be prepared as we are accustomed to prepare him for the administration of ether or chloroform. The patient may sit up in a chair, or recline on a table. Everything should be loose about the chest and abdomen excepting for very short periods of anesthesia. Special care should be taken that the apparatus is in order and that there is a sufficient supply of gas. A tongue-forceps should always be at hand. We are so accustomed to the simplicity of ether and chloroform administration that these precautions seem worthy of mention. Neither morphin, atropin, nor strychnia is at all necessary as a preliminary. The bag should be filled with gas and enough passed through the connecting-pipe to drive the air out. The mask is then to be applied accurately to the patient's face, covering nose and mouth. Any mustache or beard should be wholly within the mask to prevent entrance of air. Allow the patient to breathe deeply three or four times into the mask, then turn on the gas. After a dozen respirations the breathing becomes deep and

rapid. To and fro breathing dilutes the nitrous oxid and is not cleanly. To allow for this the stop-cock is arranged with a valve which allows the expired air to pass out but prevents entrance of air at inspiration. The receiving-bag is to be kept nearly full all through the administration, and to accomplish this there must be a constant current from the cylinder to the bag. It has been stated that difficulty in administering the gas is a bar to its general use. The writer has not found this to be so. After a little instruction from one of our prominent dentists and a practical illustration of his methods, I found myself able to use it. Two of the internes at St. John's Hospital have become adept in its use.

There are some persons who take the gas badly, just as there are some who take ether badly. This is true of alcoholics. The higher up in the intellectual scale the patient is, the more readily does he take all anesthetics.

Physiological effect is probably produced by the shutting off of oxygen from the circulation. Locally, nitrous oxid is anesthetic to the skin by reason of its freezing quality. When the gas is inhaled there is a sweetish taste which is not disagreeable. When the gas is carefully administered the sensations are pleasant, there is a sense of warmth to the lips and a delicious numbness comes over the body. This stage lasts only ten to fifteen seconds, then respirations become more rapid and deep, there is a sense of fulness in the head, and patient loses consciousness so quickly that he has no time to realize any definite sensations. In the second stage, which lasts about one minute, the patient lies perfectly quiet unless something is done to excite a reflex. He breathes freely and pulse-rate is slightly increased. Color becomes dusky or livid, and the patient looks very badly to one not accustomed to nitrous oxid. At the beginning of the third stage the patient may snore, the eyelids twitch and separate and the ball of the eye rolls up; there is a slight convulsive movement of the facial, thoracic, and abdominal muscles, then the arms and legs fall limp and the patient is anesthetized ready for operation within one and one-quarter to one and three-quarter minutes from starting the anesthetic. The mask may then be removed and there will be an available period of from forty-five to sixty-five seconds for operative procedure. The eyelids may not separate and the lid reflex cannot be depended upon as an indication of anesthesia. Pupils are generally dilated but may be contracted or remain unchanged. When it is desired to prolong the anesthetic the mask

is removed while the patient breathes air once or twice, and again applied until respirations become very shallow or color dark and sallow, when air is allowed again. This may be kept up for a very long time without danger to the patient but not without alarming symptoms in some cases. If *no* air is allowed patient may stop breathing for some seconds but the heart is not affected. When this happens the mask is to be removed and the tongue pulled forward and the patient will soon breathe. I believe it would be almost impossible to destroy life with this agent except with intent. If the gas is carelessly given jactitation may occur, but only lasts a few moments in most cases. The atmosphere is the natural antidote for nitrous oxid and after the removal of the gas the patient soon becomes conscious. There may be slight nausea and light-headedness for a few moments. Vomiting very rarely occurs, excepting when gas is administered on a full stomach, and not often even then. There is no shock caused by this anesthetic.

Dr. Hasbrook reported some years ago that he had used the gas 52,000 times, lasting, some one and one-quarter hour, some twenty to forty minutes, with no fatal case. There were alarming symptoms in some cases with old pleuritic adhesions.

Dr. Chas. Buchanan, in the *Medical News* for 1893, says that gas has been used for dilating sphincters, lancing felons and abscesses, injecting hydroceles, carcinoma of the lip, phimosis, compound comminuted fracture, lithotrity, lithotomy, tracheotomy, amputation of the breast, and always successfully.

Dr. Geo. R. Fowler reported in 1889 a case of laryngectomy lasting one hour and forty minutes in which gas was administered by Dr. G. W. Brush of this city. There was absolutely no shock and patient would have walked from the operating-room had she been allowed.

In a personal letter Dr. W. T. Bull tells me he has used the gas for a forty-minute operation and frequently for operations lasting five to ten minutes with satisfaction. He also tells me that he uses it frequently as a preliminary to ether. He has found trouble in its administration because of frequent changes in the interne staff at the New York Hospital, and because the apparatus got out of order easily.

Dr. G. W. Brush in 1890 reported its use in amputation of the arm, thirty-five minutes; carcinoma of the lip, one hour and twenty minutes; lithotrity, one hour; lithotomy, thirty minutes;

two cases of amputation of breast, one lasting twenty-five minutes, the other thirty minutes.

In the St. Bartholomew's Hospital reports the anesthetics used have been:

	1896.	1895.	1894.	1893.
Chloroform . . .	2553	2350	2524	1887
Nitrous oxid . . .	1507	1682	1516	1001
Ether	242	981	1420	824
Nitrous oxid and ether .	1150	701	17	75
Ether and chloroform .	33			28
Total . . .	5485	5714	5477	3813

If nitrous oxid is used in an institution where such careful work is done as at St. Bartholomew's Hospital in so large a proportion of cases, it would seem either that we in America are content with our own methods when better ones are at hand, or that the gas works better in London than here.

It has been used with great satisfaction at the Vanderbilt Clinic, Surgical Department, for short anesthetics.

Dr. Mapp, who first instructed me in the use of this agent, tells me he has used it many thousand times with no fatal result, and hundreds of times for operations of some duration.

Drs. Marion Sims and Fessenden Otis both used the gas frequently and with satisfaction.

The writer has used the gas some fifty times, either operating himself or giving the gas while some one else operated. The operations have lasted from three to thirty-three minutes, and with one exception the anesthesia has been satisfactory in every respect. This group of cases includes:

Curettage of Uterus. two cases; one lasting twenty-five, the other fifteen minutes.

Skin-grafting, two cases; one twelve, the other sixteen minutes.

Resection of Knee, thirty minutes.

Catheterization of Ureters, twelve minutes.

Perineal Section, eleven minutes.

Orchidectomy and Incisions for large sloughing area, thirty-three minutes.

Exploratory Laparotomy, ten minutes.

Metastatic Abscess, twenty-two minutes. This case was of especial interest. The patient, a well-known surgeon of this city, had undergone two operations within a month; one under chloro-

form, the other under ether. Both times the vomiting had been so severe and persistent as to endanger his life. Under the nitrous-oxid anesthesia the operation was satisfactorily performed and within a half hour he was hungry for, and ate, his breakfast. The other operations were for inflammatory processes, phimosis, removal of foreign bodies, amputation of fingers, hypospadias, repair of cervix and perineum, sebaceous cysts, ingrowing toe-nails, removal of adenoids. I have not used the gas in obstetrics because chloroform is perfectly satisfactory.

Dangers and Mortality.—Nitrous oxid is an inert substance as far as the human organization is concerned. It acts as an asphyxiant by shutting out oxygen. No poison circulates in the system as do ether and chloroform. The natural antidote, the atmosphere, is always at hand and always working. The alarming symptoms may be in a degee avoided in several ways.

1. By admitting oxygen from time to time.

2. By using oxygen and N_2O gas, in varying proportions, each with its own cylinder and separate bag.

3. By using nitrous oxid pure and admitting air from time to time. Practically, this is the way, and we always give it.

By alarming symptoms I refer to the color of the patient's face and extremities, and cessation of respiration. These do not alarm one accustomed to its use. When one realizes how generally this gas is used by dentists without much training and on patients who walk in from the street—how it is administered without any knowledge of the condition of the patient's kidneys, heart, lungs, or blood-vessels—it seems extraordinary that there should have been reported only 17 deaths from this substance during all the decades of its use. Of these 17 deaths, reported by the *Lancet's* Commission on Anesthetics, some seem to me unjustly put in the list. Dr. H. C. Wood says that Dr. Buchanan is probably right when he put the mortality of nitrous oxid at 2 in 10,500,000. It is safer to take the gas than to cross any crowded thoroughfare.

In 1896 Professor Gurlt of Berlin showed that the statistics for five years gave:

1 death in 2909 chloroform narcotizations.
1 " " 6004 ether narcotizations.
1 " " 5745 Billroth's-mixture narcotizations.

While I do not believe that we have any such mortality in America, we all recognize chloroform and ether to be dangerous

agents both in their immediate and secondary effects. On the point of mortality nitrous oxid is easily the best anesthetic.

Contrast the choking sensation, the excited stage, the struggle, sometimes only overcome by the brute force of orderlies and nurses; the long time necessary to bring about anesthesia under ether, with the quiet, peaceful sleep, produced in less than two minutes, by nitrous oxid.

Contrast the nausea and vomiting, the thirst and retching, the headache, and, most of all, the shock of ether, with the quiet waking into an almost immediate normal condition from nitrous oxid.

Contrast the organs affected by ether and chloroform—the heart, the lungs, the kidneys, and the stomach—with these same organs absolutely not affected by nitrous oxid.

I do not compare chloroform with nitrous oxid because it is so much more dangerous an agent that we, in America, use it only when especially indicated. If these things are so, why do we not use the gas more generally?

Disadvantages of N_2O as Compared with the Other Anesthesias.—There are very few men practising surgery to-day who are familiar enough with its actual use to teach the hospital internes the method of its administration. In fact, few of our hospitals are equipped with an apparatus, so that if one wants to use this agent he must send for a dentist to administer it. As far as I know, the use of N_2O is not taught in the colleges.

The apparatus is bulky and complicated as compared with that for ether.

It is much more expensive.

Muscular relaxation is not so complete as with the other anesthetics, in some cases, but this *need* only imply a slight increase of annoyance to the operator. The dark color of the blood is somewhat of a bar to delicate dissection. Micturition occurred in one per cent. of a series of 1000 carefully recorded cases by Dr. Silk, and illusions in six cases in the same series. Opisthotonos occurs occasionally. An exacerbation of an old insanity is reported. Of course we must realize that nitrous oxid has been used largely for very short periods of anesthesia and in comparing statistics this must be taken into account.

It has been said that children do not take the gas well. I have used it six times on children between seven and ten years of age, and had no difficulty.

Special Indications.—The gas has been used without disad-

vantage in cases of phthisis and apoplexy. It has been much used by Dr. Dudley Buxton, for Mr. Victor Horsley, in cases having epilepsy, without disadvantage.

Menstruation is no bar to its use; neither is pregnancy nor lactation. I should say that it was especially indicated in those old people whom we know for some undefinable reason will not take ether well. It seems also indicated in patients suffering from kidney disorders and sluggish circulation. It is especially indicated in cases of acute or chronic bronchitis.

I find no case of pneumonia following its use reported.

In my experience it is more satisfactory both to patient and operator, in cases of inflammation requiring incision and drainage, than any of the local anesthetics. The realization of what is going on and the sight of instruments and blood often cause more discomfort than the actual pain.

Nitrous oxid is not going to take the place of ether and chloroform. If for any reason the more common anesthetics seem contraindicated, almost every operation can be performed under nitrous-oxid anesthesia with safety to the patient, but it may be with an added annoyance to the operator.

My claim for this agent is that it is far superior to any of the local anesthetics; that it is the best we have for all simple incisions, with drainage, and for all minor operations where absolute relaxation and fine dissection are not necessary. "The ideal anesthetic is the one that produces anesthesia and relaxation without trenching on the natural processes."

DISCUSSION.

Dr. J. S. Wight said that he was much pleased that this subject had been brought before the Society. He had often thought that he would use nitrous oxid, but there was a way so much easier and there was so much apparatus about this, that he had not done so. That certainly ought not to be an objection in a case of life and death. He had used it occasionally in short operations, and he thinks the essayist well remarks that the patient looks badly while under the influence of the gas. It is unpleasant to see a patient get so black that you can hardly distinguish whether he is alive or not. Still, he knew of no fatal case resulting from its use.

He recalls a case in which he operated some twenty years ago in which Dr. Brush gave nitrous oxid. It was only a small, vascular growth over the scapula, but the patient did not become

herself for two or three days, and she vomited continually. He supposed that was an exceptional case.

He had operated upon a gentleman to remove a tumor of the right breast, and he elected the nitrous oxid. In that case he hurried the operation because he thought the patient was going to die. The operation was finished in about nine minutes and he had the satisfaction of knowing that in a little while after the operation the patient got up and went downstairs to dinner.

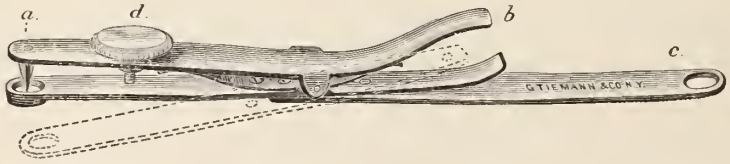
Dr. Henry Wallace said that some years ago he assisted the late Dr. Rand at a case where the nitrous-oxid gas was administered. It was an operation for hemorrhoids and fissure in ano. The anesthetic so changed the color of the mucous membrane that the operation was rendered quite difficult. When the doctor had finished he remarked that he did not think he should ever use the gas again in this class of cases.

During his term of service as interne at the Long Island College Hospital he had used, with a great deal of satisfaction, Dr. Wight's ether inhaler, and found it especially adapted to the etherization of patient's in the Sims' position, in which cases the ordinary towel or Allis' inhaler is awkward of application.

A SPRING ACNE LANCET AND EXTRACTOR.

BY L. G. LANGSTAFF, M.D.

This lancet is designed as an improvement on the lancet now commonly in use. It is accurate as to the depth of puncture required and is instantaneous in action ; this latter feature making it almost painless. It can thus be used whenever required without



the patient objecting. The extractor attachment I consider much superior to the watch-key or similar contrivance.

I feel sure that the lancet should be more frequently used than it is now ; cures would be more rapidly made and pits and scars avoided. Nearly all papules should be punctured and their contents expressed ; as they will be found to be papules in appearance only.

The above cut shows the instrument very clearly, though a short description of its action may be necessary. The aperture at the end marked (*a*) is pressed over the lesion, the lancet having been set to the required depth by means of the set screw at (*d*). The thumb is then pressed down on the end of the lever at (*b*) and being suddenly released the blade strikes home. A small flat spring beneath the lever acts as a recoil and the blade is at once released from contact, thus avoiding any scratch should the patient suddenly move. The part (*c*) acts as a handle which, as the dotted line shows, folds out of the way when the extractor at the end (*b*) is to be used. The lancet blade itself is triangular in shape with concave sides and cuts on its three edges.

The instrument is made by the firm of Geo. Tiemann & Co., N. Y., who have carried out the author's ideas very satisfactorily.

19 Seventh Avenue,
Brooklyn, N. Y.

BROOKLYN SOCIETY FOR NEUROLOGY.

Regular Meeting, Held March 31, 1898.

Dr. A. C. Brush, President, in the Chair.

Dr. Haynes presented a case of "intention tremor" in a man aged thirty-seven, existing ten months, and affecting successively the right arm, leg, and lower right side of face, then left side of face, arm, and tongue, with exaggerated reflexes, ankle clonus, bladder weakness, no eye symptoms, circulation enfeebled, no heart trouble, urine normal, very good family and personal history, except alcohol and tobacco, and obtruded sensibility, especially on the right side. He discussed the subject of tremor with reference to this case under the heads of occupation neuroses, hysteria, malingering, neurasthenia, senility, paralysis agitans, syphilis, metallic poisoning, Graves' disease, dementia paralytica, toxemia (alcohol and tobacco), disseminated sclerosis, circulatory disturbances, and post-hemiplegic tremor due to hemorrhage, without being able to satisfactorily classify this case, though some of the members were inclined to the diagnosis of paralysis agitans.

Dr. H. Elliot of the Manhattan State Hospital then read a paper on "The Delirium of Insanity," drawing attention to the normal development of the mental processes in childhood, youth, and adult life, and that the delirium of the insane in their illusions, hallucinations, and delusions, is simply the perversion and distortion of these natural processes of sensory impressions translated into disturbed motor-impulses.

W. H. Haynes, Secretary.

THE BROOKLYN MEDICAL JOURNAL.

Communications in reference to Advertisements or Subscriptions (Subscription Price $2.00 per annum) should be addressed: Business Manager, BROOKLYN MEDICAL JOURNAL, 260 Hancock Street, Brooklyn, N. Y.

Exchanges should be addressed: BROOKLYN MEDICAL JOURNAL, 356 Bridge Street, Brooklyn, N. Y.

Books for Review and Articles for Publication should be addressed: BROOKLYN MEDICAL JOURNAL, 157 Columbia Heights, Brooklyn, N. Y.

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EDITORIAL.

MAJOR GEORGE R. FOWLER, M.D., U.S.A.

The President of the United States has appointed and the Senate has confirmed George R. Fowler, M.D., of this city, as Chief Surgeon of Division, with the rank of Major. In securing the services of Dr. Fowler the Government has been most fortunate, and we extend to the Doctor our best wishes for an active service in the field.

ASSOCIATED PHYSICIANS OF LONG ISLAND.

Under the above title an organization has been perfected whose object is to keep in close affiliation the physicians practising in Long Island. At a meeting held at Garden City on June 8th, a committee appointed for the purpose submitted a form of organization and by-laws, providing that the membership should consist of members of the county medical societies of Long Island; that the society be called the Associated Physicians of Long Island; and that there should be four regular meetings held annually in different parts of Long Island, but that the regular annual meeting be held in Brooklyn.

GEORGE RYERSON FOWLER, M.D.,

SURGEON, 14TH REGIMENT, N. G., S. OF N. Y., 1878–87.
BRIGADE-SURGEON, SECOND BRIGADE, N. G., S. OF N. Y., 1887–98,
STAFF OF GEN. McLEER.

The following officers were elected for the ensuing year: President, William Browning of Brooklyn; first vice-president, L. A. Lanehart of Hempstead; second vice-president, William A. Hulse of Bay Shore; third vice-president, Charles Jewett of Brooklyn; secretary, R. J. Morrison of Brooklyn; treasurer, A. H. Ferry of Patchogue; historian, Joseph H. Hunt of Brooklyn.

A paper was read by H. A. Fairbairn of Brooklyn, on "Prognosis in Chronic Nephritis;" also, one on "Immunity," by Ezra H. Wilson, Director of Bacteriology in the Hoagland Laboratory. J. McF. Winfield read a paper illustrated with photographs and microscopic specimens on an interesting case of leprosy.

After the meeting adjourned, dinner was served on the inclosed piazza of the Garden City Hotel.

DISPENSARY QUESTION.

Interest in the dispensary question is again revived by the formation of an organization representing the dispensaries of the City of New York. It was the privilege of the writer to attend the first meeting of these representatives, and the spirit evinced was most commendable. All seemed animated with the desire, first, to ascertain the extent of the evil complained of, and then to devise methods for its diminution, and, if possible, its abatement. At this meeting the chairman, Mr. Theodore L. Frothingham, a prominent lawyer of Brooklyn, and well known for his ability and astuteness, was authorized to appoint a committee of three, who should frame by-laws and a general plan of permanent organization. Under the auspices of this association we shall hope that whatever is feasible will be done without the necessity for applying to the legislature for laws which may or may not produce the result desired. Certainly it should be the first duty of those who seek to better things to confer with this organization, which, through its officers, will be in direct touch with the dispensaries of the city.

It is interesting in this connection to refer to the paper written by F. R. Sturgis, M.D., in 1879, and published in the "Transactions of the Medical Society of the State of New York" for that year. Although published twenty years ago it is an excellent statement of the existing "dispensary evil."

PROGRESS IN MEDICINE.

GYNECOLOGY.

BY WALTER B. CHASE, M.D.

SENILE UTERINE CATARRH.

Croom (Edinburgh Obstetrical Society) (*Lancet*) says the condition was much more frequently met with in hospital than in private practice, probably because the poor sought relief only under more or less urgent circumstances. Various monographs had been written on the subject, and under various titles— for example, "Fetid Endometritis of Old Women," "Post-climacteric Endometritis," "Leucorrhea of Old Women," and "Senile Uterine Catarrh." The last term seemed best to describe the group of symptoms. A due appreciation of uterine catarrh, occurring after the climacteric, would save many an unfortunate woman from vaginal hysterectomy, which, with improved methods and increased safety, was too apt to be had recourse to without adequate reason. The differential diagnosis from malignant disease was the great difficulty in such cases. Sexton thought most cases occurred soon after the menopause, and advocated the term "post-climacteric endometritis." But many sought advice years after the climacteric, and these were the most marked cases and the most difficult to diagnose.

Case I.—Patient aged seventy, pale, sallow, emaciated; mucopurulent, fetid discharge; constant pain in the back, irregular colic in the pelvis; no hemorrhage; uterus two and one-half inches, retroverted and mobile, os gaping; duration, eighteen months. A probe dressed with pure carbolic acid was passed from time to time, hot douching and arsenic, and a cure effected in three months.

Case II.—Patient aged sixty-five, profuse leucorrhea, sometimes streaked with blood, occasionally a clot. Backache and griping pelvic pain; uterus three and one-half inches, hard and globular. The cervix was dilated, and the cavity curetted and packed. After the lapse of six years she was perfectly well.

Case III.—Patient three years after menopause extremely emaciated, sudden and profuse hemorrhage, no pain, os gaping and

soft, uterus three and one-half inches, hemorrhage at intervals of two or three days for three weeks, cervix dilated, scraping of mucous membrane and escharotic; cavity drained by iodoform gauze. After five years no recurrence.

These three cases illustrated what Croom considered the three forms of senile uterine catarrh: (1) Those associated with fetid discharge and no hemorrhage; (2) those associated with leucorrhea and slight hemorrhage; (4) those in which hemorrhage was the main, if not the only, symptom. Every one was aware that post-climacteric hemorrhages were in the main due to: (1) The beginning of cancer; (2) the recrudescence of a fibroid; (3) occasionally in gouty women, but then only a form of uterine catarrh with gouty endometritis as its basis. The symptoms were extremely like those of malignant disease. There were vaginal irritation, general cachexia, sallow skin, and emaciation; occasional rigors and night-sweats; the latter symptoms really due to a slow sepsis. The most striking symptom was the discharge, which was more offensive than in cancer. The uterus was slightly enlarged, more often normal, not normally atrophied; the sound caused great pain; a scraping showed inflammatory changes and granular degeneration. In cancer the uterus was always markedly enlarged and more fixed. Real "floodings" were much more common in cancer. With appropriate treatment senile catarrh improved in a week or two. As to the differential diagnosis between primary cancer of the body of the uterus and senile catarrh, the following points were noted: (1) Periodic and severe pain was in most cases an early and prominent symptom of cancer, whereas in the senile condition it was irregular and colicky, or if not, it was slight and constant. (2) Fetid discharge in the earlier stages of cancer was unusual, because the os was closed and the surface of the cancer protected from external influences. In catarrh fetid discharge was a prominent and early symptom. (3) In cancer, uterus distinctly enlarged, sensitive, heavy, and fixed early. In senile catarrh, normal or slightly enlarged, freely movable throughout. (4) Dilatation and local exploration revealed the presence of a neoplasm in the one case and absence of all irregularities in the other. It was difficult to speak with certainty as to the causes of senile uterine catarrh. (1) As a rule no suffering during menstrual life meant freedom after physiological atrophy. On the other hand, a fibroid tumor, displacement of the uterus, any form of inflammation, might keep the uterus large after the menopause—it might become affected with

post-climacteric inflammation. Such a history during menstrual life was not an essential precondition. (2) Tilt pointed out that very often the cervix shrank, whereas the body of the uterus was inflamed, fluid became pent up, and colicky pains resulted. Thus Matthews Duncan several times punctured the cervix to allow the fluid to escape. Tilt's cases were mainly senile inflammation of the cervix and vagina, not so much of the body, and he strongly recommended caustics. Senile uterine catarrh was not among the prodromata of malignant disease; the two conditions were quite distinct. Croom had never seen a case of the simple condition later become one of cancer. As to treatment, rest was best when the condition was non-malignant or doubtful; and with rest, hot douching, and the exhibition of arsenic, strophanthus, and Chian turpentine. The last-named drug had an equally good effect in clearing up purely uterine inflammation and cervical inflammatory hypertrophy. Nothing gave better results than the application of escharotics by means of dressed sounds, or still better, the curettage of the mucous membrane, with subsequent packing and draining. The main point insisted on was the fact that these cases were so often mistaken for malignant conditions, and patients were repeatedly sent for hysterectomy for supposed malignant disease when in reality they were sufferers from the simpler condition, which quickly yielded to treatment.

PROCEEDINGS OF SOCIETIES.

THE BROOKLYN PATHOLOGICAL SOCIETY.
THE 393D REGULAR MEETING.

February 10, 1898.

The President, Dr. James P. Warbasse, in the Chair.

The program of the evening was under the charge of Section IX., Dr. F. E. West, Chairman, and Drs. Blake, Burge, Coffin, Fogarty, Hancock, Herman, Ingalls, Little, Magilligan, O'Grady, Pray, Schenck, Seymour, Spence, and Wackerhagen.

Twenty-two members were present.

SCIENTIFIC BUSINESS.

A Case of Cholesterin Crystals in the Anterior Chamber. Demonstration in Patient; by Dr. J. W. Ingalls. History: Through the courtesy of Dr. Mathewson, I am able to show you an inter-

esting case which came to the Brooklyn Eye and Ear Hospital; history briefly as follows: E. N., male, age thirty-six. Twelve years ago received a blow on left eye; soon after cataract developed; operation of needling done in a few months; vision much improved. Three months ago came to Hospital. V. = light perception only. Examination showed cholesterine crystals in anterior chamber. When the eye was turned in different directions crystals could be seen moving. Surface of iris thickly studded with crystals which resembled "gold dust" or "brass filings." In the vitreous are large flakes which appear in thickened masses. The particular point of interest in this case is the presence of the crystals in the *anterior chamber*. Of course this product of retrograde metamorphosis is not infrequently seen in the vitreous, but to be found in the anterior chamber and on the surface of the iris is an extremely rare occurrence.

It makes it interesting that even those not accustomed to the use of the ophthalmoscope can see the crystals there very plainly. There is but very little literature on the subject. I have taken pains to look it up to a slight extent, but I have been unable to find any reports of similar cases, and Dr. Mathewson says that during his thirty-years' experience he has never seen a similar case, so of course it must be one of some rarity. The patient is in the other room, and I would be pleased to show him to those who have not already seen him.

A Case of Congenital Syphilis.—Specimens presented by Dr. L. P. A. Magilligan, consisting of liver, kidneys, heart, lungs, and spleen. In the absence of Dr. Magilligan the specimens were demonstrated by the President.

Vermiform Appendix Presented by Dr. T. B. Spence.—This first specimen was removed from a lad fourteen years of age about ten days ago. He came to my care in the service of Dr. Fowler, in the Methodist Hospital, with a history extending over six days, beginning with the symptoms of pain in the epigastrium, which after a day or two became located in the right iliac fossa, and the attack began with vomiting and a history of constipation. There was some fever. He was kept in bed for the six days and was then transferred to the hospital. At that time there was boardy rigidity of the whole abdomen, a little more marked on the right side; tenderness on the right side most marked at McBurney's point. He thus presented all the typical symptoms of appendicitis. An oblique incision was made at the usual site of the appendix and only a very short piece of appen-

dix was found, not more than half an inch or three-quarters of an inch in length; at first that seemed to be all the appendix that there was present. It was taken off and found to be patent through the whole length. A further hunt discovered the tip of the appendix, which had become empyemic, and then owing to ulceration had entirely separated from the rest of the organ, but the stricture remained, and this completely closed pus sac was practically free in the abdominal cavity. Possibly a little of the mesentery remained to nourish the wall of the sac, or perhaps it derived its nourishment simply from the adhesions. There was an abscess about the whole appendix a little higher up than usual—behind the colon. The whole thing was removed in the usual way, drainage used, and the patient made a good recovery.

This other specimen is an appendix which presents the condition which perhaps this did at the beginning. It is empyemic at the end, but had not perforated. In spite of this fact the case had a diffuse peritonitis when she came into the hospital, with a very large abscess up behind the liver. The pelvis itself was full of pus, and there was sero-pus through the whole peritoneal cavity. Free drainage was resorted to in this case, an ice coil applied, and the patient made a good recovery at the end of four weeks.

The President: Possibly Dr. Spence would not object to incising that free end for us, before it is passed around. That is an extremely rare and interesting condition of things.

Dr. Spence [incising specimen]: It is very much thickened and does not show the pus now. It was distinctly fluctuating at the time it was removed, before it was detached and put in alcohol, and showed yellow there. I feel quite certain there was pus there at that time. I have seen one such case there before, where there was a little pus-sac free in that way.

Dr. Wunderlich: I can only say that I have never seen a case like it.

Intestinal Obstruction; Carcinoma of the Hepatic Flexure of the Colon. Presented by Dr. Spence.—This woman was forty-four years of age. She gave a history of two years of constipation, but for the last three months before she came to us this constipation was a good deal more marked, and she had great difficulty in getting any movement of the bowels at all during that time. She lost strength and flesh rapidly. For the last two weeks before we saw her the constipation had been almost complete, and for nine days she had had no movement of the bowels whatever. Two days before admission to the hospital the abdomen became

very greatly distended, and she began vomiting; the day before she vomited fecal matter. At the time of admission the bowels were very greatly distended and it was impossible to make out anything by bimanual palpation; rectal examination was negative. An operation was considered imperative; a median abdominal incision was made, and the intestines everywhere were found to be greatly distended and deeply congested. The hand was swept all about the abdomen, and a hard mass was finally felt at the hepatic flexure of the colon. The incision was carried up a little higher and this mass was brought to view; it proved to be carcinoma of the hepatic flexure of the colon. This was resected at this point and the Murphy button inserted. I think I omitted one very important feature in its introduction, and I am forced to believe that this omission was responsible for the death of patient. She did very well the first day after the operation, the abdominal distension disappeared entirely, she passed gas freely and some fecal matter. At the end of the first day she showed symptoms of peritonitis, and died on the second day from her peritonitis. The post-mortem showed that there was a leaking on the mesenteric side of the gut. The precaution that I speak of—which is emphasized by Murphy—lies in passing the purse-string suture at the end of the gut before the half of the button is inserted. He then passes the suture through the mesentery twice so that it does not slip on the mesenteric side of the gut, and thus really forms two separate purse-strings firmly held at the mesenteric end that draw the mesenteric side of the gut up in between the buttons. I believe this to be a very essential part of the procedure, since Murphy lays such stress upon it, and the leakage in these cases is invariably at that point, if this precaution is not taken. This is the specimen that was removed. There was complete obstruction; only a very small instrument could be passed through.

DISCUSSION.

Dr. Wunderlich: Is the Murphy button as applicable to any union of the colon—large intestine—as the simple suture would be, or as the end-to-end suture would be, or lateral suture anastomosis?

The President: The Chair infers from Dr. Wunderlich's remark that he thinks that a simple end-to-end anastomosis or lateral anastomosis would have been more effective in uniting the large intestine.

Dr. Spence: I suppose any of you could say that almost any-

thing would have been more effective than my treatment of that case, since the result was as it was. If the case had recovered then I would have denied the allegation. The Murphy button certainly was put in more quickly than I could possibly have done the suture. From what I know of the Murphy button I am inclined to think that it ought to be effective there. It cannot be placed in the large intestine so readily as it can be in the small intestine. To suture at the hepatic flexure, or to make an anastomosis of any sort is a difficult thing, but I am inclined to think the Murphy button is applicable even there.

Dr. Henry: Mr. President, this recalls a case I had under my supervision one time, a man about sixty years old who had hung himself. I was called in to see him when he was hanging, although he was cut down when I got there, and he was nearly dead He exhibited a very bad heart, but finally I was able to resuscitate him. Previous to this for more than a year he had suffered almost continuously with pain, and following the hanging he was for about two weeks without pain, although he had taken an anodyne. Then his pain began, and that followed through for ten months. During this period he would have attacks when it was more severe. There was constipation to a great degree—almost obstipation—and in many details it was very much similar to this case of Dr. Spence. At the end of ten months after he had hung himself, he died from the result of his disease. Dr. Tieste, I think, made the post-mortem, and found a cancer at the pyloric end of the stomach, not large enough, however, to be an obstruction, but we found the intestines bound down everywhere by adhesions. In some places, for three or four inches, the colon would not be larger than your finger, and the small intestines were bound down everywhere, so it showed evidence of chronic peritonitis which caused this pain during this time, and it was this pain which caused him to hang himself. At the time he hung himself he evidently had a temporary mental aberration as a result of the pain. But the symptoms, except the vomiting of fecal matter, were, as I judge from the Doctor's description, very similar to his case, and I mention it as an instance correlative and to indicate how these adhesions may give all this disturbance, without the cancer being sufficient.

Extensive Necrosis of the Bones of the Hand, Following Felon. —Presented by Dr. W. L. Chapman.

The specimen presented here illustrates very well this variety

of bone inflammation, involving, as it does, the entire finger and metacarpal bone.

The case presents the usual clinical history of this affection, but there was a slight circumstance connected with it to which it seems well to call attention.

Mrs. G., aged thirty years, married, with five children. On July 3d, while dressing her child, pricked the end of her index-finger with a safety-pin. She paid no further attention to it until about three o'clock the next morning, when she was awakened from sleep by a severe throbbing pain in the finger. She applied a bread and milk poultice, but the pain increased and the finger began to swell, so about 10 A.M. on the 4th they sent for Dr. Bartley.

They were informed that Dr. Bartley was away on a vacation, so they sent for another physician in their neighborhood.

This physician told her that she had a felon; incised the last phalanx down to the periosteum, and dressed the finger antiseptically. He washed and dressed the finger again on the 5th, 6th, and on the morning of the 7th. At this time the entire hand had become swollen and painful, and they informed him that they were going to change their physician.

I saw the case late on the night of the 7th. She had a severe cellulitis of the hand and the pain, which was severe, extended up the arm to the shoulder. She was restless, and had a temperature of 102° F. On the morning of the 8th I incised the hand freely on the dorsum and also on the palm, and inserted iodoform gauze to secure drainage. The constitutional symptoms shortly abated, but the wounds continued to discharge until on the 28th, when the middle phalanx fractured spontaneously. On the 30th inst., Dr. Bartley and myself amputated the finger, but finding the metacarpal bone involved, removed that also. The metacarpal bone was not largely affected, but the patient had become greatly debilitated and we were afraid to leave any affected bone behind.

The family were very angry with the physician who first treated the case, and we had some difficulty in persuading them from bringing suit against him for damages. This is the matter to which we wished to call attention.

These were ignorant people, and attributed the loss of the finger to the unskilful treatment of the first physician.

Of course they could not have obtained any damages, as the physician had treated the case properly, but it would have given

him some unpleasant notoriety. They could have found plenty of unscrupulous lawyers to take the case in the hope of scaring him into a settlement, and a careless remark from either of us would have caused them to undertake it.

Many damage suits for malpractice are caused by the statements of the physician who saw the case at its termination. In order to relieve himself of any responsibility in the case, he throws the blame on the one who first attended the case. There is one statement occasionally made by physicians which is a disgrace to the medical profession, lowering to the one who makes it, and injurious to his colleagues; its use is altogether too common; it is "If I had only seen the case a little sooner."

The reason I speak of the medico-legal part of it is that there are two cases pending now for similar affections. One was lanced, but did not terminate so favorably—the patient died. The other one is just like it. I have not the privilege of mentioning these cases directly, as I heard of them through friends. The suits are about to be brought.

DISCUSSION.

The President: Dr. Chapman's observations, from a medico-legal, from an ethical standpoint, are very pertinent, and contain much wholesome material; it is well to have some wise sentiment like that expressed once in a while in our scientific meetings.

Dr. J. D. Sullivan: I cannot say anything about the medico-legal aspect of the case, but it is certainly a very interesting case from the fact that such a small wound could create such disturbance. Is the open incision the best treatment for cases of that kind, that we know of just now? That is the accepted theory; it is good practice; I do not criticise it.

I do not like to be personal too often, but I met with something similar last summer and was strongly advised to have my finger opened; and I went to Dr. Van Cott and he suggested carbolic acid. I took Dr. Van Cott's treatment in preference to the open wound, and I think I fared better. If there is anybody who has had any experience in arresting these septic infections by carbolic acid, or any other way except by the open incision, I would like to hear about it. In fact, I have not been very favorably impressed with opening them and applying the usual antiseptic dressings. They do not arrest the spread of the disease as fast as we would like to do it. I do not know of any other method except something to arrest it in that way.

Certainly this case progressed very rapidly. It would appear that the disease should have been arrested earlier, before such an amount of damage took place. We see infected wounds very frequently, but a result as bad as this is comparatively rare.

Dr. E. H. Bartley: Apropos of Dr. Sullivan's query, I might report my own impressions and experiences. I believe it is an old recognized treatment to attempt to abort these septic wounds, or the extensive infiltrations the result of these septic wounds, by various methods, such as painting with iodine, painting with nitrate of silver, painting with belladonna, saturating with tincture of lobelia. I have tried all those methods rather freely and I am quite certain that in spite of the statement in some of the works on surgery that they are of no avail—I am quite certain I have seen the repeated and thorough saturation of the skin with tincture of iodine do good. I think I have seen many of them cured. I believe that there is a certain amount of absorption of the iodine and consequent disinfection, or perhaps destruction of the poisons that are developed. I believe the growth of the organisms can be inhibited at least, and I have seen many cases of that kind that have stopped short of suppuration. It is my practice to go far above the affected part. I remember on one occasion I had a chance to try it upon myself, in making an analysis of a stocking that had poisoned a lady quite severely, and which without washing she had put on, and an eruption occurred; the color of the stocking was brown and the dye was a complex one. The stocking was first dyed black by the ordinary iron dye and then dyed with fuchsin on top of that. To fix the aniline color they had used an abundance of tartar emetic, and the tartar emetic was still there, so that the poison was due to the tartar emetic, and brought about a violent rash. I found others in the market in different stores dyed in the same way, which were confiscated. In making the analysis I spilled some of the solution of the coloring matter upon my hand by an accident. I had a little abrasion of the posterior aspect of the hand, and within one-half hour I began to feel the effects of it, and red streaks—I suppose the lymphatics—formed on the back of the hand, plainly visible, and in one hour extended to the elbow, and in an hour and a half to the shoulder, and the whole arm began to pain me severely. I coated the arm from the shoulder to the tip of the fingers with iodine, every part of it, and succeeded in two or three hours in arresting the pain, inflammation, and so on, and the arm recovered in the course of twenty-four to

thirty-six hours. That is one example, and I had a good chance to watch it and was quite interested in seeing it do the work.

I have had within the last three days a poisoned wound beginning around the matrix of the nail of a young lady who in paring her nails had cut them too deeply, and set up quite an extensive cellulitis of the thumb, which had extended to the second phalanx when I saw her. I painted the whole thumb and back on to the hand with iodine, and directed her to paint it about three times a day for a few days, until it did one thing or the other—until it became worse, or got better. She was to report in thirty-six hours, and it is now three days and she has not reported. Of course she may suffer yet, but the supposition is—and it is in a family I can depend upon—the supposition is that it has subsided. That is not absolute evidence, I know, but I cite these cases in which all the appearances of septic inflammation began and were aborted or checked by this thorough saturation. I usually go some distance above the infected part and do not hesitate to paint the whole arm. Patients will sometimes say they taste the iodine when I do that. I am satisfied that they get some into the saliva, and I think it is fair to presume they get some in the tissues, and I think it is quite possible that the iodine may check such an inflammation. I usually, in addition to painting with iodine, apply the other remedies, except opening, and in many of these cases of course I am obliged ultimately to open; but some of them can be checked in this way. I do not know of any antiseptic that we possess that is better than iodine. I would quite as soon advise the injection of iodine as carbolic acid. I think the diffusion more rapid; there is less destruction and charring of the tissues about the point of incision owing to the caustic effect, or the necrotic effect—is less with iodine than with carbolic acid.

In regard to the case reported by Dr. Chapman, I attended the case part of the time, and it was certainly a very severe and rapidly extending case, and the only change in the early treatment that I could have suggested, would have been to open through the periosteum, and I presume the physician thought he did that. He evidently went down to the periosteum and probably thought he had cut through it, but possibly he struck into the tendon and did not get further. It emphasizes the necessity of a very thorough opening when one makes up his mind to do that, and go down as far as the knife will go.

The most remarkable part of it is the rapid development of

the thing. The lady told me that she pricked her finger one day and the next morning, early in the morning, the wound began to pain her. She told me she consulted the physician that morning about six or seven o'clock—early in the morning—it pained her so severely; that is, perhaps twelve or fifteen hours after the receipt of the injury.

Dr. Wunderlich: Mr. President, in infection at a very early stage, I have seen a very good effect from the application of ethereal solution of iodoform, and it has given good results, but when it has progressed further, I prefer to use the high percentage applications of ichthyol. I have seen very good results from both of those.

Dr. Sullivan: I would like to ask the last speaker what results he has had from the early open incision, before suppuration has taken place—if that does arrest it?

Dr. Wunderlich: Provided the incision is made deep enough and extends through the entire area that is affected. I can speak from personal experience on my middle finger that I opened one night at three o'clock. One of my colleagues advised me not to cut it, but it commenced to thump, and rather than run the risk of having a stiff finger I made sure to get down to the bone, and the result was very satisfactory.

Dr. Sullivan: Does the opening arrest the process, or does it simply give an opportunity to arrest the infection; that is, with something that will kill the germ—the streptococcus or staphylococcus, or whatever it may be. Of course, incision gives drainage, but unless the wound is soaked in an antiseptic solution of some kind, I do not see how the mere opening will arrest the poisonous process that is going on.

Dr. Wunderlich: I believe that something depends upon the kind of infection which takes place; and I think, as it was in my case, with a true felon and periostitis the incision, by giving a free discharge and drainage, will in itself be sufficient. Of course there may be other kinds of infection, and I have seen lately a case where a man injured his finger by trying to get something out of a barrel in which hides had been packed. It caused a severe infection of the hand, and a colleague was obliged, forty-eight hours after the infection, to anesthetize, and make several openings on the hand and above the wrist. The man was admitted into the hospital, and there was considerable swelling of the arm, and the upper arm was invaded, with great danger or prospects of the man losing his life. His condition was very

serious, and in that case the washing out with chlorid-of-zinc solution and then opening of the pockets of pus, giving free drainage, and the application of the ichthyol, arrested further progress. But I think that the character of an infection will always be a very important point in regard to the wise or proper treatment to follow—or successful treatment.

Dr. E. H. Bartley: In Dr. Chapman's case, less than twenty-four hours after primary infection it was opened through the periosteum down to the bone, and the process went on in spite of that. During this time the finger was washed out daily with peroxid of hydrogen, and part of the time with peroxid of hydrogen and iodine combined—a little iodine added to the peroxide of hydrogen; and I do not know how any better disinfectant or antiseptic treatment could have been secured. Gauze was kept in and the wound was kept wide open, and in spite of that it went on and did not stop at the end of that bone; it went on to the next and the next—two bones above that—and dissected up the periosteum, and the bone became so diseased as to fracture spontaneously, and when we had amputated the finger, taking off the first three phalanges, then we found on examination there was some necrosed bone far up the metacarpal bone, and that we removed.

I think that the little remark that was made at the end of the report is quite as important as the rest of the paper. We all of us meet with certain unpleasant things in the practice of medicine, and the most galling part of it is that the most unpleasant part is frequently brought about by a brother practitioner, some great friend of ours, and we not only get the "G. B.", as the younger members say, but we get besides that the insinuation that we might have done better, and that if they had only seen it a little sooner, everything might have been avoided. I have always adopted the plan to never criticise another physician's treatment, unless I happen to be on the spot and see it as he saw it at the time. If I see it as he saw it—if I see the train of symptoms as he saw them, then I am in position to criticise him; but if I come in after certain symptoms have subsided, after certain plans of treatment have failed, and after he has gone through the whole gamut of the pharmacopœia and has not succeeded in arresting the disease, then for me to come in at a later day and to say "Well, it is too late"—that does very well to say in consumption —"it is too late"—but it always was. The impression that is given the family is—"If I had only been called in earlier I could

have performed wonders;" and the evident intent of such a remark is to make the family think that he is a little better than his fellow practitioner. It is the meanest kind of sneaking meanness that I know of, and it is not manly. It is not—well, we won't call it professional; it is not professional, of course, but it is not even decent, behind another man's back who perhaps is a better man than I am, to say, "Oh, if you had sent for me some time ago I could have done something, but now it is too late." It is much better to say nothing. When one is in doubt what to say, it is a very good plan to say nothing.

Dr. Sullivan: In the present case they ought to do more than say nothing; they ought to uphold the first practitioner.

On behalf of Dr. John Harrigan, Dr. Zimmerman presented the following case of

LOBAR PNEUMONIA COMPLICATED WITH ACUTE MENINGITIS.

Maggie G., age thirty-nine, single, domestic, United States; admitted to St. Mary's Hospital, January 18, 1898.

Family History.—Father died of heart disease, mother of paralysis. One sister died when a child, one of paralysis, one of valvular disease of the heart. One brother and two sisters alive and well.

Previous History.—Had scarlet fever and croup when a child; had inflammatory rheumatism six years ago and was cured. Has never been sick since. Drinks whisky and gin when unwell.

Present Illness.—The history is very meagre on account of the nervous condition of the patient. She has evidently been drinking a good deal for about a week. Three days ago at the commencement of the attack, she had severe cramps low down in the chest and in the abdomen. Had some cough and spit up a slimy material. No history of a chill. Temperature 102° F. Pulse 120. Respiration 30.

Physical Examination.—Tongue coated and very dry. Face flushed. Fingers and lips tremulous.

Lungs. Inspection.—Chest well formed. Respirations hurried; diminished respiratory movement in upper part of chest on left side.

Palpation.—Increase of vocal fremitus in left infraclavicular region.

Percussion.—Flatness below clavicle on left side, as low down as third rib.

Auscultation.—Bronchial breathing, bronchophony, and whis-

pering bronchophony heard below the clavicle on the left side. Numerous crepitant râles heard in front and back below the third rib. The bronchial breathing is not well marked posteriorly.

TREATMENT.

℞—Sodii bromidi,	. . . . .	gr. xl
Chloral,	. . . . .	gr. v
Tr. digitalis,	. . . . .	*m* x
Spts. frumenti,	. . . . .	℥ ss.

q.—3—h.

Ammonia carbonat.	. . . . .	gr. iii.

q.—2—h.

January 20.—Patient spent a very restless night, and it was with difficulty that she was kept in bed. This morning she is very delirious, but not noisy. Respirations are more hurried and snoring in character. Alæ nasi dilate widely with the respirations. Cyanosis about lips and nose is marked. On account of the tossing about of the patient a pneumonia-jacket made of gauze, cotton, and oiled silk was applied.

To reduce temperature, which is persistently high, resort was had to cold sponging of the extremities. Oxygen was given ten minutes every half hour.

January 23.—Patient still very restless, but character of the delirium somewhat changed; she no longer attempts to leave the bed; but is constantly muttering incoherently, and has a marked subsultus tendinum. Pulls at the bedclothes nearly all the time. Up to this time she has had no cough. Back of the neck is stiff, and she frequently puts her hand to her head. Eyes show a diffused injection of the blood-vessels. Pupils do not react to light.

January 24.—Temperature next day went to $104\frac{3}{5}°$ F. by axilla. Pulse 140 and very weak and irregular. Given 30 *m.* tr. digitalis by hypodermatic injection. Afterward $\frac{1}{30}$ gr. digitalin was given every two hours. Just before death 1 ʒ of ether was given hypodermatically, but pulse did not respond. Patient died at 9 P.M.

AUTOPSY.

Left lung firmly consolidated in the upper portion. Ordinary gray hepatization.

Brain.—Dura adherent to the skull, surface of brain very red from injection of the blood-vessels. In places there is a distinct opaque gray membrane with a granular feel. All over the surface there is a transparent membrane, very thin, in places dipping

down into the sulci, and binding them together so that they cannot be separated without difficulty. A distinct membrane also covering the structures at the base. The most marked feature is the deep red injection of the blood-vessels on the surface.

ACUTE PNEUMONIC PHTHISIS.

H. W., age thirty-three; single; steelworker. Admitted January 13, 1898.

Family History.—Mother died of senility. Father and one sister alive and in good health.

Previous History.—Had ordinary diseases of childhood. Has always been in perfect health since, but has had a slight hacking cough, with a little expectoration for the past three weeks. Gives an alcoholic history.

Present Illness.—He comes to the hospital to be treated for alcoholism, having been on a spree for the past two weeks. His stomach is intolerant to food, and he has eaten very little for a week. He is nervous and excitable, and has a tremor of hands and lips. Has had a diarrhea for several days. A few days ago his cough became more aggravated, and he spits up a white slimy mucus. He had a pain in the *right* side below the nipple, but has no pain at present. Has not had any chill.

Physical Examination.—Patient robust-looking and well-nourished. Face very much flushed. Lips parched and trembling. Tongue furred and coated. Marked tremor in the fingers; facial expression worried.

LUNGS.

Inspection.—Chest well formed; respirations hurried. Diminished expansive movement on left side.

Palpation.—Increase of vocal fremitus on left side, especially in the infraclavicular, mammary, and axillary regions.

Percussion.—Marked dulness in infraclavicular, mammary and axillary regions of left side, also dulness in left suprascapular and scapular regions.

Auscultation.—Bronchial breathing, bronchophony, and whispering bronchophony in supra- and infraclavicular regions on left side, also in scapular and suprascapular regions; crepitant râles heard at base of the lung front and back. Exaggerated respiration on right side.

HEART.

Apex beat seen and felt in normal position. Sounds normal and distinct. Action regular and forcible. Pulse 110.

KIDNEYS.

Specific gravity of urine 1025. No albumin or sugar. No casts. Phosphatic crystals in abundance.

LIVER.

Slightly enlarged.

Spleen negative. Temperature 100⅔. Pulse 110. Respiration 25.

TREATMENT.

℞—Calomel, gr. v, pulv. jalap, gr. x, given at once.

Sodii bromidi, ...	gr. xl
Chloral, ...	gr. v
Strych. sulph.	gr. $\frac{1}{32}$
Spts. frumenti, ...	℥ ss.

q.—3—h.

Ammon. carbonat., ...	gr. iii.

q.—2—h.

Temperature taken every two hours, and a sponge bath with alcohol and ice water when it reaches 103° F.

January 15 (two days later).—Expectoration only beginning to increase, and for the first time is streaked with blood. Patient not as nervous during the day as he was upon admission. At night he becomes more restless and mutters in his sleep. Given ¼-gr. morphia at night to produce rest. Chloral stopped and bromid cut down to 30 grains.

January 22.—Patient has been doing well up to this time. Strychnia stopped and given 10 *m* tinct. digitalis every three hours. Temperature went up to 103⅘° F. by axilla. Pulse 140. Respirations 68. Examination reveals dulness at apex of right lung, and marked bronchial breathing with crepitant râles. Numerous mucous râles all over left side; marked cyanosis of lips and nose. Given oxygen ten minutes every half hour. At about 5 A.M., on January 23d and 24th he became very weak, and pulse became almost imperceptible. Given 30 *m* tinct. digitalis hypodermically, and he rallied nicely each time. Expectoration continues to be streaked with blood, and very adhesive in character; no bad odor to the sputa. Patient perspires very freely nearly all the time. Temperature shows each day a remission of about a degree and a half in the morning.

January 26.—At 5 A.M. patient had a brisk arterial hemorrhage from the lungs; lost about four ounces of blood and coughed up shreds of lung tissue. He was very nervous and frightened.

Given Magendie *m* x hypodermically, and in forty minutes was sleeping. An hour later he had another hemorrhage, losing a still larger quantity of blood. Was given oxygen all the time, and throat was kept free from blood with sponges; he became very cyanotic, pulse grew rapidly feeble and quick, and after a few minutes he lost consciousness, dying thirty minutes later.

AUTOPSY.

Left Lung.—Firm adhesions between the two surfaces of the pleura all over the left side, most marked at the apex. Weight of left lung two and three-quarters pounds, and is firmly consolidated, except a small portion at the base, which still crepitates. Upon section the consolidated portion presents a grayish white appearance. About the apex are scattered numerous tubercles and a few cavities, ranging from the size of a hazel-nut to that of a walnut, the cavities filled with a cheesy material.

Right Lung.—Tubercles and very small cavities scattered about the apex, as well as areas of bronchopneumonia.

Heart normal.

I made the grave mistake of neglecting to have the sputa examined for the tubercle bacillus, only because it never entered my mind up to the time of the occurrence of the hemorrhage, that the affection was any other than a frank lobar pneumonia.

History: I am sure you will find one flaw in this—that we did not have the sputa to examine for the tubercle bacillus. We did not think it was anything but a frank lobar pneumonia until a few hours before his death, when he had a hemorrhage from the lungs. If we had had the sputa examined I am sure we would have found plenty of tubercle bacilli. Whether we could have done anything more for the man is a question.

DISCUSSION.

Dr. Sullivan: I have reason to think that meningitis is a more frequent sequela of pneumonia than is generally recognized. I believe that in many of the cases of pneumonia that become delirious and die unexpectedly, the death is due to meningitis. I recall a number of cases of pneumonia in years gone by that I felt were going to get well, when to my surprise, I would be called hastily, find them very violently delirious, and they would die within a day or two, without any aggravation of the ordinary pneumonic symptoms.

I believe that in these cases meningitis developed due to infection from the lungs—a septic or infectious meningitis.

Dr. W. N. Belcher: I cannot answer the question as to the frequency with which meningitis occurs in pneumonia, because I am not familiar with the facts. I can say that in making a number of post-mortem examinations in the past eight or ten years, I think there is no one condition which on gross examination is attended with as little satisfaction as the examination of the brains in cases in which in the course of the illness delirium develops. It is often my experience, while making post-mortem examinations, to have the clinician speak of the various phenomena presented during the illness of the individual—delirium and all that sort of thing; but when the brain is examined with care there is nothing in its gross appearance that would account for the delirium. In my own experience in examining a number of cases of pneumonia, post-mortem, I do not recall that there has been any unusual occurrence of meningeal inflammation associated with that disease.

Dr. Peter Scott: The case reported is interesting to me because I unfortunately just lately had such a case. I think in speaking about the delirium of pneumonia, we ought to speak of the delirium that comes early in such cases where there is the drinking habit, and the delirium which comes later, as in the case Dr. Sullivan spoke of, when the pneumonia had subsided. That was the condition in a case I had about three or four weeks ago with Dr. Cardwell. After nine or ten days the patient was apparently over his pneumonia and we expected him to get well, when he passed one or two very restless nights or days in which he got into a dreamy state and talked confusedly, and then died, apparently more from meningitis than pneumonia, from which we thought he had recovered.

I am astonished that Dr. Belcher cannot give us more information in regard to the condition of the brain in post-mortems in pneumonia, because I would have expected he would have seen in his examinations some lesion to account for such condition.

I was reminded of a saying of Dr. Gardiner's of Edinburgh, in regard to pneumonia—that delirium tremens, *per se*, is eminently curable; pneumonia, *per se*, is eminently curable, but pneumonia with delirium tremens is almost always fatal.

Paper: "The Determination of the Total Proteids and Fat in Milk, by Means of the Centrifuge (with demonstration)." By Dr. E. H. Bartley.

THE BROOKLYN SURGICAL SOCIETY.

Regular Meeting, March 3, 1898.

The President, Dr. H. B. Delatour, in the Chair.

TUBERCULOSIS OF THE TARSUS.

Dr. L. S. Pilcher presented a man, in whom excision of the tarsus for tuberculosis had been done, the history being as follows :

About five years since he first saw the man, at which time he had a tubercular tenosynovitis, affecting the tendon-sheaths upon the front of the ankle. For various reasons no operative interference was accepted by him at that time, and with the advance of years the infection spread from the synovial sheaths of the tendons to the synovial sacs of the adjacent tarsal articulations. About one year ago he again presented himself, at which time there had been superficially an extension of the tubercular affection, to the inside of the foot, causing a swelling of the inner malleolus and involving likewise the tendon-sheath of the flexor longus pollicis. He made a free dissection at that time of the affected tendon-sheaths, dissecting out the sheaths and affected tissues upon the front of the ankle-joint, passing upward along the sheath of the flexor longus pollicis ; the edge of the scaphoid bone showed itself and some of it was excised at that time. He made a happy recovery from that particular operation, but a sinus persisted and after some months it seemed that a more radical interference was required. He again submitted to operation and the tarsus was freely exposed and the astragalus and scaphoid were both found to be extensively infected, and both bones were removed *in toto*. The cavity which was left from the removal of these bones was tamponed with iodoform gauze and the part put up in an immobilizing dressing. After ten days or two weeks the tampon was removed and the parts were permitted spontaneously to contract into such positions as they might choose to take. Infection was escaped and a gradual filling up and contraction of the cavity ensued and in due time the operative wound entirely healed and has remained healed from that time to the present. In the course of the early fall he began to walk upon the foot and has walked upon it from that time to the present. There is naturally a sense of weakness in it.

There is a very fair amount of flexion of the foot. The os calcis has come up between the two malleoli and there is a very apparent cavity in front between the cuneiform bones and the tibia.

Very shortly after, or within a few months after this case was under treatment, a similar case in an adult woman presented itself and was subjected to similar treatment, a case similar in the fact that there was a tubercular infection of the bones. The early history of tubercular synovitis was not present in the woman but it was treated in the same way by excision of the astragalus and scaphoid. There was an equally happy, immediate recovery in the case and the woman left the hospital with a healed foot and able to stand and walk upon it.

Some eight or nine years ago, a young man, who had a similar disease affecting both the anterior row of tarsal bones and the two middle metatarsal bones was subjected to the same treatment by him, and the young man recovered with a useful foot. Some years afterward he heard that he was still well.

These three cases illustrate the possibilities of recovery in cases of extensive tuberculous disease of the tarsus, and suggest the desirability of attempting a conservative operative course in such cases rather than at once resorting to an amputation, although men of large experience in these cases have advised that no attempts at conservation should be made in any such tarsal tuberculous disease of an adult, but that amputation should at once be resorted to.

CONGENITAL DISLOCATION OF THE HUMERUS.

Dr. W. B. Brinsmade presented a young boy with a congenital dislocation of the humerus whom he presented in order to receive suggestions, if possible, as to the most conservative and best thing to do to give him a more useful arm. He had been the rounds of the hospitals in Manhattan and Brooklyn, and his mother states that he has been told that nothing can be done. He is ten years old and was born with the breech presenting; and this dislocation was first noticed two weeks after birth. No instruments were used at his delivery. There is the typical deformity of a subspinous luxation of the humerus, and the arm is of little service.

Dr. A. H. Bogart said that there was a similar case in the hospital, a child of ten years of age, said to have been born in normal labor, at which no instruments were used. The rotation of the humerus is inward so that the condyle points backward. The

question of whether these cases are the result of some intra-uterine trouble or whether the injury takes place at the time of birth is an interesting one. In an article in the *American Journal of Medical Science*, the author attempts to make an interesting diagnosis by measurement, and claims that in those cases in which it is intra-uterine in origin, the bones of the forearm are shorter than in cases in which the dislocation occurs at birth. The question of treatment is interesting. Some of the cases have been operated on by Phelps.

The child under the speaker's observation is rather a puny one, and it seemed to him that it might be possible to adopt the principle of Sayre, that is used in the treatment of fracture of the clavicle. Accordingly he put the bandage on this child reversed. It has been on about two weeks, and there is a decided improvement in the case.

Dr. L. S. Pilcher said that, in regard to the dislocation of the humerus in the boy presented by Dr. Brinsmade, a very full presentation of this condition in which the pathology and treatment of such cases was gone into quite thoroughly, was made before the State Medical Society at its last session by Dr. A. M. Phelps of New York. The case now presented had re-awakened the interest in his own mind which was excited by that particular paper, for up to that time it had never been his fortune to meet with a case of the kind, or if he had ever met with it he had failed to appreciate its character. And now Dr. Bogart says that there is a similar case in his own hospital.

As to this particular case it seemed to him that the proper thing surgically was to put the head of the bone back in its socket, and while in a case that had lasted as long as this one presented by Dr. Brinsmade, the boy being now ten years of age, the probabilities of permanent functional disability of considerable extent were very great; nevertheless, the surgical indication would be to put the head of the bone back in its proper relations to the scapula, to be followed by later attention to the development of the paralyzed or atrophied muscles. He recommended a somewhat curved incision posteriorly, which should embrace the projecting portion of the bone and which would make somewhat of a flap, so that when it was raised there would be not only exposed the head of the bone but would also give free access to the glenoid cavity. All obstructing tissues should be divided, sufficient to permit the ready replacement of the bone. It is possible that a certain redundancy of capsule would remain which might very prop-

erly be subject to excision and suture so as to help retain the bone in its place. As to what the condition of the long head of the biceps would be, that could be found out better in the course of the procedure than could be imagined now. The presence of want of power in the biceps is very manifest in this case. There may have been an injury or tear in the long head of the biceps and atrophy of the remaining portion. It and the deltoid and the pectoralis major are very much atrophied. The child is not so old but what there might be a reasonable expectation of securing some renewed activity in those muscles if the parts were put in a condition that they were no longer upon a stretch as they are in their present state. We well know that when paretic muscles are kept upon a stretch, their condition of paresis persists, but that when the tension is released a very considerable return of power is not infrequently manifest in the muscles which have been weak. And in this case there is reason to hope that such a result might follow.

COMPOUND FRACTURE OF THE ELBOW.

Dr. T. B. Spence presented a case of compound fracture of the elbow, with specimen, and made the following statement:

This patient worked on one of our war ships in the Navy Yard and fell from the top of the ship to the bottom of the dry dock, in April last. He sustained a bad compound comminuted fracture of the right elbow. He was treated in the usual way; the wound suppurated freely and he failed to get any union. He was kept under care at the Methodist Hospital until the 22nd of June and it was decided to do something more for him. He was told that in all probability the arm would have to come off, but he refused to have that done if he could have a hand left. For that reason the amputation was not done. A portion of the humerus three inches long was found to be necrosed and simply could be picked out. This was done and the arm was put up at right angle and the bones of the forearm were brought as near as possible to the end of the humerus. He was presented simply to show what result can come from such an injury. He has some use of his hand and a little use of the forearm. He is working in the Navy Yard, is painting, and says that his arm is useful to him in many ways. He can hold a brush and with the other hand can do the work, not as well as he could before, but he says it is a good deal better than a false arm.

Dr. A. H. Bogart read a paper on the "Operative Treatment of Varicose Ulcers."

BROOKLYN GYNECOLOGICAL SOCIETY.

Stated Meeting, March 4, 1898.

The President, Dr. J. C. MacEvitt, in the Chair.

Minutes of the previous meeting read and approved.

PRESENTATION OF SPECIMENS.

PUS-TUBES OF BOTH SIDES; APPENDIX ATTACHED TO RIGHT TUBE.

Presented by Dr. L. Grant Baldwin.

These two pus-tubes, with the appendix attached to one of them, were taken from a woman thirty-eight years old, who had been married ten years and was sterile. I saw her first on Tuesday, in the eighth week of her illness. She was taken with severe abdominal pain, and the physician who was sent for, after three days made a diagnosis of appendicitis and asked to have a surgeon called in. To this the family objected and sent for another physician. The diagnosis was changed to peritonitis. Her temperature ranged, according to the nurse's report that I saw, from 97½° to 104½°, and the pulse from about 100 to 160. There was a record of extreme tympanitic distension and prolonged and persistent vomiting. For ten days she was unable to retain any nourishment by the mouth and was nourished by the rectum. Her temperature the morning I saw her was 102½°, and pulse, 128; she was weak and in bad condition in every way; the abdomen was then considerably distended, although not to an extreme degree. A diagnosis of bilateral tubo-ovarian suppuration was easily made. After carefully considering the matter and weighing it with the attending physician and the family, they decided to accept operation as the only hope of recovery, and on the following day, Wednesday, I opened the abdomen and removed these specimens after considerable difficulty, as they were embedded in many adhesions, there being a complete closure of the pelvic cavity by intestines and omentum. Very soon after the enucleation was begun it was discovered that the cecum was bound up in the adhesions and that the appendix was adherent to the right tube and was inflamed, and I was able to leave it attached to the tube. The ovary, as you see, is a good deal enlarged and is filled with pus. The other one was in much the same condition, only not quite as large. The operation lasted

sixty-five minutes from the beginning of ether—rather long, but it was due to no complications otherwise than the difficulty of the case. The abdomen was closed with gauze drainage and the patient reacted nicely from the ether. On the Saturday night following, her temperature was $100^{2}/_{5}°$ by the rectum and the pulse 110; she was taking nourishment; no vomiting; bowels moved that day and she passed a good deal of gas. I expressed myself to the husband as feeling rather sure that, barring any accident, she would recover. I saw her early Sunday morning and for some reason I did not like her look; I didn't know why exactly, but she did not look well; she was restless and had a temperature of 101° by the rectum and pulse, 120. At eleven o'clock she surprised the nurse by calling for air, and on the nurses getting to her they found she had no pulse. I did not reach the house until one o'clock, but in the meantime she had had everything done for her that could be, but the pulse did not respond to the treatment at all and she died at half-past two Sunday afternoon. I was fearful that possibly there might have been a hemorrhage. I removed the drainage and examined the pelvic contents through the incision and found absolutely no hemorrhage and no collection of pus. She was septic; yes, she had been septic for eight weeks and undoubtedly the sepsis was not cured; but I take it death was due to the general exhaustion of the vital powers.

Dr. Jewett: Was there any suspicion of embolism in the pulmonary artery?

Dr. Baldwin: Not as far as I could make out. The symptoms were just as I described. I do not know how different they might have been if there had been an embolism, but that was not considered as a cause of death. The drainage was through the abdominal opening.

The President (Dr. J. C. MacEvitt): Sometimes it is very difficult to determine the cause of death in just such cases. It has been my experience in the hospital that a case will progress very nicely, when most untoward symptoms will develop and death ensue without any certainty as to the cause; suspicion, of course, always, with an indefinite certainty of sepsis, which covers so many causes of death.

Dr. Wm. H. Skene: I would like to say, Mr. President, one word in reference to the case in the Kings County Hospital, which Dr. McNaughton reported at the last meeting. I operated upon her, removing two large cystic ovaries and both tubes. The patient has done very nicely. I will report on her case later.

Dr. W. B. Chase: In connection with the remark of Dr. Skene there is one topic which I should very much like to hear discussed some time by this society, and that is the causative relation between pelvic disease in women—disease of the ovaries and uterus, particularly the ovaries—and insanity or mental derangement.

I have a recollection of the experience of Dr. Skene who spent a good many Sundays over a period of a number of years at the Insane Hospital at Flatbush without finding evidence of the causative relation between disease of the ovaries and insanity; yet there are those who have had opportunities for large experience, and particularly Dr. George H. Rohe of Baltimore, who is an experienced gynecologist and at the head of a large insane asylum, and his reports of cases are most instructive and gratifying as showing the relation between the disease and insanity, and especially in cases of ovarian sclerosis how the moral character of the woman seemed to be altogether changed and her thoughts ran in abnormal channels, and the results he obtained in operating on those cases. I know of a case recently in which a woman, a nurse, thirty-five years old, suffered from a fibroid involving the uterus and both ovaries—rather a rare case in that particular. She became melancholic and her case was deemed so hopeless that operation was performed, and while enough time has not elapsed to demonstrate whether she is benefited by it, there is reason to hope and expect that her useful life will have been saved, whereas she was on the border of seemingly hopeless insanity.

Reading of paper by Dr. L. Grant Baldwin.

SHALL THE UTERUS BE LEFT AFTER BILATERAL SALPINGO-OOPHORECTOMY? A REPORT OF FORTY-CASES."

[Paper read].

DISCUSSION.

Dr. J. W. Hyde: I know there is a class of patients who, while they are willing to have the adnexa removed for disease, strenuously object to having the uterus removed. This is owing to that peculiar feeling that a woman always has of a desire to preserve something of the generative apparatus. There is not much propriety in their reasoning; it should be left to the judgment of the surgeon. The etiological factor in pyosalpinx is mainly gonorrheal. So I think if a pyosalpinx or salpingitis takes its origin in gonorrheal infection, that the endometrium has been primarily infected and not unusually the uterus itself suffers from

a chronic metritis due to this same cause; the whole body of the uterus is affected, and those cases, I think, should certainly be proper subjects for panhysterectomy. But we do open the abdomen sometimes in cases of double salpingitis and find the uterus to all intents and purposes apparently in good condition, and those are cases where I should assume that it would be improper to remove the uterus.

In every instance, also, in double salpingo-oophorectomy where the uterus is the seat of a bad laceration, and especially in middle-aged women, I should advise a total ablation, owing to the possibility of the occurrence of cervical carcinoma and its ultimate metastasis to adjacent pelvic structures.

Dr. Chas. Jewett: The uterus is not a wholly useless organ after its principal function is arrested. Its removal disturbs the normal relation between bladder and rectum and its entire removal shortens the vagina. The entire uterus or so much of it as can be made practically sound should be left. It is, of course, curetted at the time of operation and the intramural portions of the tubes are dissected out or completely sterilized. If this is done and subsequent curettings practised as indicated the condition of the woman is better, in my experience, than if the organ is sacrificed. Hysterectomy can be justified only for disease not otherwise curable.

It may be objected that the uterus is liable to take on disease, but this possibility is in no wise increased, it is rather diminished by removing the tubes and ovaries. Malignant disease especially is less likely to develop after than during the period of physiological activity.

The class of cases to which the doctor restricts the vaginal incision is emphatically the one in which it is most indicated. For many pus cases which point below, or in which the pus can easily be reached through the vagina, it is positively a life-saving operation. It is curative in a very large proportion of cases and if it fails of complete cure it leaves the patient in a condition in which further procedures can be carried out with comparative safety. It is especially a life-saving operation in cases exhausted by prolonged sepsis. In many instances in which I have treated pus-tubes by this method the operation has not only saved life, but has resulted in complete cure. After draining the tubes and curetting away the diseased mucous membrane with a cheese-cloth sponge held in forceps, the uterus has been found after a few weeks freely movable. Not only the uterus, but the append-

ages are in part saved and the operation has practically no mortality.

Yet the vaginal incision is not to be limited to the mere evacuation of pus. Certain other conditions are easily and satisfactorily manageable from below. For instance, a diseased ovary hanging low in the pelvis can be reached through the vagina and tied off or partly removed with the same success as by the abdomen, especially in a parous woman. I do not mean to say, however, that the lower operation offers any great advantage when the patient is in good condition.

For the removal of tubes the lower route is not satisfactory. The operation is much more difficult and is liable to be incomplete.

In ectopic gestation the lower route is generally preferable for evacuating a mere blood collection after death of the ovum in the early months. For the treatment of early ectopic pregnancy in general, as practised in twenty cases by Dührssen, it is not likely to become popular.

Dr. W. H. Skene: I have only to say that I am also in accord with the writer of the paper, and to add that I think the doctor is to be highly congratulated on the successful results of the operations.

Dr. L. G. Langstaff: I would also congratulate Dr. Baldwin on his valuable contribution to this important subjèct, and I am in full agreement with him that an organ not diseased, such as the uterus, should not be removed. It should be a surgical truism, I think, that normal or remediable organs should not be removed. I believe that is true of the uterus infected with gonorrhea, as after the appendages are removed the disease is confined to a part where it is not liable to give rise to any danger and is more readily treated, since it is shut off from the abdominal cavity.

Dr. W. B. Chase: This is certainly a very instructive paper and the deductions from it are largely inferential. The author has not said in so many words that he regards the method he pursued as the best—while in all these cases the uterus was allowed to remain—but the argument, which is perhaps stronger than words could be, that so many of them recovered, seems to give strength to the position which he has taken. One feature which interests me very much is that in no one of the cases did he find the Fallopian tube patent; in other words, there was no communication between the uterine cavity and the tubes in which the pus

was found. There has been considerable discussion going on in recent times regarding the question whether pus imprisoned in the tubes ever escapes into the uterine cavity, and there is a diversity of opinion based on the experience of different individuals. To me, however, the fact that there is a considerable accumulation in the tube is the best evidence that the tubes are not patent; and I confess that I am very much in doubt whether a tube which has been occluded sufficiently to set up a pus accumulation in the tube ever opens into the uterine cavity, and I would like the opinion and experience of Dr. Baldwin in that particular.

Regarding the route of operation, I have no doubt of the propriety of the method pursued by Dr. Baldwin in these cases. On the other hand, there can be no question, and experience has amply demonstrated, that in cases such as referred to by Dr. Jewett, there is great advantage in making the incision below for the temporary purpose of drainage and relieving the patient from immediate danger, and then afterward, if further interference is required, the surgeon can have the choice of entering again from below, or the operation from above. The experience, as the writer of the paper said, of different men—men whose opinion is entitled to weight, on the one hand, favors removal of the uterus whenever the adnexa are removed, and on the other, allowing it to remain unless there is evidence of grave disease—it is a matter which is not settled, and I suppose will not be until larger experience goes to demonstrate which is the better practice. However, I favor the conservative theory, that unless there is evidence of disease of the uterus of a kind not likely to be cured by curettage at the time, the uterus should be allowed to remain. But if it is of a nature which is threatening, it would be better to do panhysterectomy than to allow the diseased organ to remain, which, as is known in many instances, has given a great deal of trouble afterward. The physiological reasons mentioned by Dr. Jewett why the uterus should be left, are entitled to weight. You take away a portion of the support of the pelvic viscera and, as he stated, the relations between the bladder and rectum are necessarily changed. I certainly feel that Dr. Baldwin is to be congratulated on the large number of recoveries which have taken place from the method of treatment which he has pursued, and I think it should be an encouragement to us generally, that operations in those cases be not delayed.

Dr. J. C. MacEvitt (The President): I feel like almost fully coinciding with the reader of the paper in the deductions that he

has drawn from his practical experience in these cases. One factor that would guide me very much in removal of the uterus with the appendages, would be this: the lessened chance of danger to the patient from two causes. One would be the time necessary to remove the organ; time is a valuable element in any operation, and by lessening the time you give your patient a better chance for recovery. Another would be the lessened chance of hemorrhage; but where you find this condition, salpingeal or double pyosalpinx, due according to your belief to gonorrheal infection, and from the physical appearance ot the uterus, its touch, the previous history of sepsis—I would argue in favor of its removal. Where there is a mild endometritis or stenosis, or a laceration as alluded to by one of the speakers, I would permit the organ to remain, such conditions, in my opinion, are not of sufficient gravity to warrant jeopardizing the patient's chances of recovery by lengthening the operation by removal of the uterus. The fact that so many of these cases have so thoroughly recovered after the removal of the tubes, would go to show and substantiate the fact that if the uteri were diseased at that time, auto-cure has since taken place, provided no medicinal applications or treatment have been made, as I infer from the Doctor's remarks.

Dr. L. Grant Baldwin: I really can say very little about the liability of the uterus, when left behind, to take on degenerative changes. My belief has been that it would be less liable to than before, and that has been based partially upon the theory, which is very old I believe, that after the menopause is once thoroughly established—whereas at that time there is great danger of new growths and degeneration—after it is once thoroughly established there is comparative immunity, and if the menopause is brought on artificially I see no reason why it should not be about the same. We all know how hard it is to keep track of cases. If they come to one doctor and are not relieved by his treatment, or if they are relieved, perhaps the next time they go to somebody else, and it is very hard to follow them, and questions of that kind to be settled by absolute demonstration require a great deal of time. It has been my practice with all these cases to curette the uterus as a routine practice before the abdomen was opened, using a sharp curette and doing a thorough operation in that respect; and in many cases the mucous membrane has been thoroughly touched with pure carbolic acid.

In regard to Dr. Chase's question, *there was absolutely no case*

in which the uterine end of the tube was patent. There were a few cases in which the pus was well into the horn of the uterus, but never into the cavity of the uterus. Those cases occurring two or three years ago were dug out and cauterized, but latterly I have dissected them out and closed the peritoneum over them.

As regards the method of the abdominal or vaginal route, I think I am thoroughly in accord with the gentlemen who have spoken. A moderately enlarged ovary, or any enlarged ovary, free from adhesions and low down in the pelvis can certainly be gotten out with great facility through the vagina, and certainly the cases do seem to do better and have their convalescence smoother and more rapid than when it is done through the abdomen. But even of that I am not so sure but the same cases would do about as well if done through the abdomen.

The matter of support, whether the uterus is left behind, is a question that can only be decided after a good many years. Certainly if the uterus is prolapsed before an operation I do not believe it would add very much to the support after. In fact I am inclined to believe the prolapsed uterus, if the bladder does not come down with it, might be taken out and the adhesions make a stronger support than before, but of that I am uncertain.

As to the infrequency of hydrosalpinx, there was observed also a unilateral hydrosalpinx that I remember, but only one side being involved it could not be included in this list.

I should have been glad if the gentlemen had told me whether in their opinion the operation of removing the entire uterus through the abdomen was more difficult than removing the ovaries and tubes, the statement is broadly made that there is no more difficulty in removing the whole uterus than its appendages. I have never been able to reconcile myself to that statement. I know it is not as easy for me.

Dr. Maddren: You make it a routine practice to extirpate the remainder of the tube in the stump in the uterine wall by dissecting it out?

Dr. Baldwin: Getting well up into the uterine tissue and closing the peritoneal flap over it, but not going in through the muscular wall.

Only one of these cases I have reported have I ever treated by any special local treatment. That one was a case of pus-tubes evidently of gonorrheal origin, and she returned to me afterward with another attack of gonorrhea and that was cured with the usual methods without any special difficulty.

I thank the gentlemen very much for the discussion.

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

ENTERED AT BROOKLYN, N. Y. POST OFFICE AS SECOND CLASS MATTER.

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VOL. XII. No. 8. WHOLE No. 128. | BROOKLYN, N. Y., AUGUST, 1898. | Single copies 25 cents $2 a year, in advance

ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

DIAGNOSIS OF THE DISEASES OF THE FALLOPIAN TUBES.

BY WM. H. SKENE, M.D.

Read before the Brooklyn Gynecological Society.

The diagnosis of the diseases of the Fallopian tubes is not easy. The clinical history as given in our most reliable text-books is not as full or complete as the subject warrants. Assuming that this statement is correct, there is certainly room for further research. I beg to submit some of my experience in this special branch, but before beginning I should like to give a synopsis of some of the best authorities.

Salpingitis.—Inflammation of the tubes may be acute or chronic.

Pathology.—In acute catarrh the mucous membrane of the tube is thickened, congested, and covered with neutral or acid mucus, muco-pus, or an opaque fluid which contains lymph-corpuscles and epithelial cells which have changed in form or which have undergone granular degeneration. The longitudinal folds of the mucosa are effaced, the fimbriæ are obliterated or obscured by inflammatory products, and the ends of the tube are

usually closed. If not, the contents of the tube enter either the uterus or the abdominal cavity, in which latter case pelvic peritonitis results.

Perisalpingitis usually occurs in severe cases. The tube is increased in size, tortuous, and dilated irregularly, and when the purulent secretion accumulates the tube, which is closed at each end, becomes greatly distended. This is known as pyosalpinx. In this condition the epithelia are flattened and the mucous and muscular coats are gradually thinned, so that rupture into the peritoneal cavity is most frequent, in which case general peritonitis or pelvic peritonitis results. Occasionally, chronic dropsy of the tube is the result of a transudation of serous fluid, and the tube may become distended and form a small cystic tumor; or it may be converted into several distinct cysts without any intercommunication, since the tube between them has been totally obliterated by the inflammatory process. This is known as hydrosalpinx.

Symptoms.—Pain in the neighborhood of the appendages or in the lumbar region; the pain is of a colicky nature, followed sometimes by the discharge of pus which comes not so much from the tubes as from the cavity of the uterus. Pressure on the abdomen or in the vagina near the tubes causes pain. This pain is often accompanied by gastralgia and vomiting; it is most marked at the menstrual period.

Diagnosis.—Pyosalpinx is to be suspected if the dilatation of the tube follows gonorrheal infection and if the tumor is very closely adherent.

Hydrosalpinx and pyosalpinx are usually double, while hematosalpinx is unilateral.

If the tubal mass is of large size and there is no extensive adhesion, we probably have to do with a hydrosalpinx; pressure is less painful than in the case of pyosalpinx.

While the tumor is still movable we may mistake it for a small ovarian cyst, and especially for an intraligamentous cyst. The latter, however, is more decidedly lateral, and is not usually separated from the uterus by the space corresponding to the pedicle of the tubal cyst. The differential diagnosis from tubal pregnancy in the first four months is almost impossible to make with certainty. In the majority of cases where these fetal cysts have been removed, the operation has been undertaken for supposed salpingitis. Enlargement of the uterus and expulsion of a decidual membrane are the only diagnostic sign and symptoms.

An inexperienced examiner is very apt to mistake a large serous or bloody cyst for uterine fibroma, and it is indeed often very difficult at first to distinguish the one from the other. But the uterine sound, carefully used, will show a great increase in the uterine cavity when there is a fibroid, and a normal cavity in the case of the tubal affection.

The differential diagnosis between a large cyst of the tube and a fibrocystic tumor of the uterus is in some cases almost impossible, yet the increased size of the uterine cavity, as demonstrated by the use of the sound, will determine the question.

I desire to call special attention to some points that are not dwelt on by the authorities, which I think the following cases will illustrate:

Mrs. B, fifty years old; been married nineteen years; two children, last one fourteen years ago. Menopause one year and a half ago. She consulted me in regard to pain in her pelvis. On examination I found the uterus retroverted and a mass on each side. It seemed to me as if the tubes were distended, so I advised an operation for the removal of the tubes, feeling that after the adhesions were separated the uterus would go back in place. This plan seemed feasible on account of the patient's age, as we expect atrophy at this time. After preparatory treatment an abdominal section was made. When the abdomen was opened I saw the error in my diagnosis, for I found instead of the tubes being distended they were normal in size. Both ovaries, however, gave indication of chronic ovaritis, and my supposed tubal affection proved to be a portion of the intestine occupying the sac of Douglas and containing two fecal masses, occupying the position where distended tubes are usually found, overlapped by the uterus. I removed both ovaries and separated the adhesions; the uterus returned to its normal position, but during her convalescence she was treated for ptosis or prolapsus of the bowel.

Case II.—Patient was twenty-three years of age; married four years; one child two years ago; forceps were used at her delivery, at which time she sustained a unilateral laceration of the cervix uteri, which extended high up into the vaginal wall on the left side.

The patient came to my clinic complaining of pain in the left ovarian region, which was made worse after any exertion. Examination revealed a large mass in the left side, which was exceedingly tender to the touch causing subsequent pain. I

treated the case for some time, using equal parts of iodin and carbolic to the cervix; also, ichthyol tampons and hot douches. The patient received relief by this treatment, but still continued to suffer and was somewhat helpless.

An operation for the restoration of the cervix was advised and accepted. In the operation I removed all the scar tissue in the cervical wall, but an indurated mass remained in the posterior portion of the broad ligament; but this mass finally disappeared, presumably by absorption. The patient is now quite well, and the indurated mass found on the left side that felt like a distended and adherent tube proved to be a result of an old cellulitis caused by a laceration of the cervix.

These two cases have come under my care recently, and my object in choosing this subject was for the sole reason of having the members of this Society add their wide experience to my very limited one.

DISCUSSION.

The President: I regret very much that the program did not state that these lantern slides would be exhibited to-night; it would have had the effect of bringing out a larger audience.

I will ask Dr. Alexander Skene to open the discussion:

Dr. A. J. C. Skene: The author's limited experience in the way of blundering in diagnosis set forth in the paper accords very well with my, perhaps somewhat larger, experience. I think I can claim to have made as many blunders in the diagnosis of diseases of the tubes as anybody that I know anything about; I have in times past mistaken prolapsus of the ileum for a diseased and distended tube. Those cases of chronic ovaritis, giving a history of long-continued subacute pain in the region of the tubes, with a preceding history of ordinary endometritis, lead one to suspect tubal disease. The metritis determining the character of the salpingitis, which is usually secondary to the metritis, the disease of the tubes takes on the character of the metritis necessarily, and hence the catarrhal variety ending in hydrosalpinx is simulated in case there is prolapse of the intestine. I may repeat that in those cases where there has been and still exists an ordinary corporeal or general catarrhal metritis, associated with long-continued pain, tenderness, and functional disturbance of the ovaries, tubes, and uterus, with that history, and on examination you find tenderness to the touch—subacute because the case is subacute—and you find alongside of this tender ovary a non-adherent mass, soft, distended, sometimes

considerably, with semisolid fecal matter or with gas, I have several times made the mistake of supposing I had hydrosalpinx or the result of a catarrhal salpingitis. The way I came to know that I made the mistake was this. The presence in a given case of the chronic ovaritis, which made the patient an invalid to a certain extent, marred her usefulness, and she did not respond to treatment so far as making a recovery. I discovered that it was judicious to make an exploratory operation and remove the supposed diseased tubes and ovaries, in case I found them sufficiently destroyed or disorganized as to warrant their removal. I found that the ovaries were diseased and the tubes were normal or nearly so, and found a piece of prolapsed intestine which closely simulated a distended tube.

I used to make another blunder in diagnosis which the following case will illustrate: The patient had had a puerperal peritonitis and just escaped with her life, and subsequently developed chronic ovaritis, which gave her an immense amount of trouble, and in that case it was easy to make a diagnosis of chronic ovaritis, for I had an opportunity of studying the disease; first the swelling and softening of both ovaries, with their subacute tenderness, and then their subsequent shriveling, from becoming cirrhotic, continuing exceedingly painful and always presenting what appeared to be distended tubes. She was so anxious for relief that I had hard work to keep her from being operated on. I ought to say, however, that she saw Dr. Thomas before she came to me, and he made the diagnosis of ovaritis and salpingitis—the tubes distended—and Dr. Thomas advised that she should try the effect of treatment for a time and see if she would not get relief in that way. Being somewhat in doubt as to the accuracy of my diagnosis so far as the tubes were concerned, and hoping that she would be relieved when the ovaries were completely destroyed by the process of this degeneration, the results of chronic ovaritis, I treated her for six or seven months. She failed, however, to get relief, and the pain being very distressing and annoying to her, she begged for an operation. In order to be sure, however, that I was right in operating, I asked her to see some other authority, and her friends selected Dr. Polk, who wrote me a letter stating that he found distended tubes and diseased ovaries, and by all means advised that she should be operated on. I operated and found as I expected, the ovaries diseased and extensive varicose veins of both broad ligaments. One of the Keiths helped me at the operation, and although he

had seen a large number of operations of the kind he said he had never seen anything to begin to equal the condition of the veins; in fact, both of us were so fascinated by our new discovery that we took time to study it. Many of those veins were as large as a finger, and a cluster of them together gave the feeling of a fluctuating tube, with this difference—which I did not then recognize—that the elasticity was more marked and that they yielded to pressure more than a distended tube would.

Prolapsed intestine and varicose veins have led me astray on several occasions. They no longer do so, for I examine such patients in the exaggerated Trendelenburg or exaggerated knee-chest position, and find that the tumor disappears. Placing the patient in either of these positions, a little pressure will raise the intestine sufficiently far up to know that it is not a tube, or it will sometimes slip out of the pelvis of its own accord. If there are many adhesions this will not take place, but the contents of the intestine can be pressed up out of the pelvis, so that the distended canal collapses and shows that it is not a tube. Placing the patient in this knee-chest position, or the exaggerated Trendelenburg position, the varicose veins disappear, and the differential diagnosis is made in that way.

Some reference was made, I think, in the paper, to the difficulty of differential diagnosis between salpingitis and tubal gestation. I have never made any special mistake in the diagnosis under those circumstances that I can recall. I can see, however, if a patient came for examination and I should see her but once I might make that mistake, but if one has an opportunity of getting the history of the case clearly (which is not always easy), and find a preceding endometritis, especially if it is corporeal, and the trouble has existed as long as it usually does before the tube becomes distended, a history of some pelvic trouble existing for two or three or four months, I think that one would hardly mistake it for a tubal gestation, because the uterus is not so much enlarged and the patient's general health is more likely to be deteriorated, and so on; so there is less likelihood, in case one has plenty of time to get a complete history, of making a mistake in differential diagnosis between tubal gestation and hydro- or pyosalpinx.

I have referred elsewhere to the question of pregnancy in a uterus unicornis or bicornis. That is extremely difficult to differentiate, I believe; but this is well known to you all, so I need not refer to that now.

I said I had not made any serious mistake that I remember in the differentiation between tubal gestation and salpingitis or any of its varieties. I now distinctly recall the fact that a gentleman of the profession brought a patient to me, and I made a diagnosis of endometritis, and either an old salpingitis or pelvic peritonitis. That patient subsequently was known to have had at the time I saw her, on one side a tubal gestation, and on the other side a then commencing salpingitis; so that I must credit myself with this one other blunder. If I am not mistaken, I saw a case not very long ago in the practice of the author of the paper read to-night, where the diagnosis of tubal gestation was made when there was another pathological condition present. The history (as I remember it, and I will be corrected if I am mistaken) was that a physician was called to her, and received the history that she had been ailing with pelvic pain and so on, and some disturbance of the menstrual function—just what I don't remember—but she had violent pain, and was in sort of collapse, not severe perhaps, but in collapse, and suffering intense agony which he had difficulty in relieving; in other words, she had the history of a patient with a ruptured tubal gestation. All the symptoms and history pointed to that, and I am inclined to think it gave a very fairly typical history of a ruptured tube from gestation. The physical signs revealed a mass on the left side, but pretty well filling the entire pelvis, and pushing the uterus to one side, and extending down to the pelvic floor, an elastic, tender mass filling the entire left side and central portion of the pelvis, and extending pretty well to the right, and yet there was some room on the right; or if it was on the right, then there was some room on the left—I think it was the left side—giving the physical signs almost exactly of subperitoneal rupture of a tubal gestation. She was taken to the hospital, and recovered from her collapse; she was very much distended, the bowels had not moved, and I have an idea she had retention of urine perhaps. It was a question what should be done for her. She was in a condition where something in the operative way was evidently called for. It was with great difficulty, I believe, that her bowels were made to act at all, and there was a suspicion that this might be an impacted fibroid; a fibroid of the uterus, a subperitoneal or subserous fibroid pedunculated, and packed down in the pelvis, with some salpingitis or disease of the tube and ovary—some acute trouble—added to the original disease, which would account for the collapse and pain that simulated a ruptured tube at the time the

Doctor saw her. Dr. Wm. Skene did a hysterectomy, and the patient got along very well. The tube and ovary of that side were diseased but not ruptured, and yet there was an acute inflammatory trouble in the region of the tube and ovary with the impaction.

Dr. Wm. Skene: There was a nodule on one side which felt like the body of the uterus. I passed a sound into the uterus, and it measured just three inches.

Dr. A. J. C. Skene: That was a misleading feature which I forgot—that the uterus was pushed to one side as in rupture into the broad ligament of a tubal gestation, or subperitoneal hematocele from rupture of blood-vessels without gestation, and the fact that the uterus was of normal size or not very much enlarged, would almost tempt anybody to believe it could not have been a fibroid, because the uterus is almost always enlarged very much more than in this case, when that happens.

There are other cases where I have been in doubt, and when the doubt is such that one finds no good and sufficient indication for immediate operation, I believe that it is always well to wait and see what new developments will come. Most of those cases show their diagnostic points more clearly if we wait. I very often find, however, that in a given case the indications for operative interference are very clear, because of the fact that the patient has been treated judiciously and intelligently, and yet receives no relief, and is so much of a sufferer that she really demands the relief In those cases we very often can make a partial diagnosis sufficient to warrant us in operating, and then complete the study of the patient when we get there.

Just one word more, and that is in reference to the very interesting case which Dr. Dickinson called attention to, which is the second unusally large pus-tube that I have had my attention directed to—the point is this: For a long time now I have adopted a somewhat different method of dealing with those large distended tubes, or with an adherent suppurating, smallish ovarian cyst or even a good-sized one; but especially those small ones that are in the pelvis, where I am afraid that the contents are of a pathogenic character—if that is a good expression to use—and my method is to tap or rather aspirate under the strongest pressure or suction pressure that I can obtain. I found that in many cases in tapping there was a little leak alongside of the trocar, and the leak is almost sure to occur in the kind of case where you don't want it to, where the contents of the sac are purulent

or septic, for then the cyst wall is usually very friable and sometimes necrotic, and it is impossible with any kind of trocar to tap a cyst or tumor and remove its contents without contaminating the peritoneum. Now, for a long time I have adopted the plan of having a very large aspirator with a powerful pump that some of my associates do not enjoy particularly, but it is an advantage in operating. Then when I plunge the trocar in, which should correspond in size to the size of the tumor, I turn on the tap, and have the suction so that you immediately take the pressure off the tumor, and so no part of it is forced around. And then another advantage I find in the use of that is, supposing you have a ruptured cyst, and associated with your cyst or with your fibroid or tumor there is a large quantity of fluid in the abdominal cavity, it is the quickest, safest, and cleanest way of getting that out, and the same thing applies when you flush the abdomen to get all the fluid out that you want, and is much better than sponging it out, and the method is to hitch on to the aspirator a tube with a perforated nozzle, and pass it in there and pump it out in that way. You can pump a gallon of fluid out of the abdominal cavity in that way, just as you can pump a gallon of ovarian tumor fluid out, certainly in a minute. I do not know but you can take a gallon a minute for any length of time, because you can transfer the stopper of the pump from one reservoir to another, and so go on in that way. I thought at one time it was very bad policy, or rather awkward and blundering surgery to empty a pus-tube or a small ovarian cyst deep down in the pelvis before you had separated your adhesions, and if you can do that without rupturing your cyst it is a good thing to do, because when the tube is collapsed you cannot always safely find the line of demarkation and separate it. But I much prefer to empty the sac if it is distended, whether a tube or ovarian cyst, if it is much distended, and the wall appears to be friable, the color showing its nutrition is bad or it may be necrotic—I prefer to tap in that way, and then draw out and sponge it clean, and then separate the adhesions and withdraw the sac. I have succeeded in that way in escaping rupture in cases that long ago I certainly would have ruptured, and had all the trouble that comes therefrom.

Dr. L. Grant Baldwin: I have been very much interested to find that other men as well as myself could not diagnose tubal disease correctly. Every one who has had little or much experience in this work has made mistakes, and will probably continue

to do so. The trouble that I have found is in making a diagnosis of the exact condition, but not as to whether the patient needed operation. In the early stages of salpingitis, many times there are but few symptoms; in many cases there are *no* symptoms until the pus-tube ruptures. It is not uncommon at all, that the first the woman knows she is ill is that she is stricken down with rupture; there may be no previous history of illness whatever. The two largest tubes I ever took out—I think I showed them here—just filled an ordinary pint can. That woman was at a ball on Christmas night, and while there she experienced the first pain she had ever had in her life. The day after New Year's I operated with the patient's pulse at 70 and normal temperature, and yet with these enormously distended tubes with rupture in one side.

The difficulty of making a diagnosis of tubal pregnancy in my experience, has been, in a number of cases, that the symptoms of either a pus-tube or an inflamed ovary were so identical that it was impossible for me to differentiate, and a recent case will, I think, prove that: A young woman, twenty-four or twenty-five years old, who had been married three or four years. I dilated and curetted the uterus eight months ago for sterility; she had anteflexion with endometritis. She was carefully examined under ether before the operation, and a glass stem was sewed in the cervix, which she wore for three or four weeks. The relief from her dysmenorrhea was positive and permanent. She last menstruated on the 20th of September, 1897, and she saw nothing from that time until Christmas morning. In the meantime she had vomited every morning and had pains in her breasts, the breasts were much enlarged, and she had given every evidence of pregnancy. I had heard of this through the husband, and had congratulated myself upon having obtained a cure. She sent for me early Christmas morning, and I found that after being up in the morning a sufficient length of time to get her husband's breakfast, she was taken with a sudden pain which was so severe that she fell over and fainted in the middle of the floor, and was picked up and carried to bed by the neighbors. Immediately following that she had a flow of blood from the vagina which was dark in character—not bright red or of the character of hemorrhage. On examination I found an enlarged uterus, and a mass in the right side the size of my two fists. Taking everything into consideration, I did not hesitate—and I should say that within the past eight months the woman had been practically

perfectly well, had neither had an ache nor a pain, and I had never seen her since the operation—to make an unqualified diagnosis of ruptured tubal pregnancy, feeling as sure of it as ever I felt of anything in my life; the tumor was plain, the history was plain, and I advised her to undergo operation, which she did the next day, and I found an inflamed ovarian cyst about the size of a grape-bunch; there were extensive adhesions all over the pelvis, showing she must have had a pelvic peritonitis prior to operation. The left tube and ovary were also adherent, but not specially diseased other than the adhesions. The whole thing was enucleated without any special trouble; the cyst removed, and the other ovary freed from its adhesions and the fimbriated ends of the tube cut off and opened, and I did what Dr. Dudley calls his circumcision operation on the tube, and left that tube and ovary in situ.

Dr. A. J. C. Skene: I would like to ask Dr. Baldwin in regard to the Dudley operation that he speaks of.

Dr. Baldwin: It is what he calls his circumcision operation on the tube. In those cases of catarrhal salpingitis where the tube and ovary are not destroyed positively beyond usefulness, that is in the present ideas of conservative gynecology, he simply cuts off the fimbriated extremity and slits it up on the back very much like a circumcision, and puts a stitch in each side, folding it back, and then simply puts a stitch through that to the ovary so as to keep them in position, and he reports two cases of subsequent pregnancy after this operation.

Dr. A. J. C. Skene: Do you mean he treats a diseased tube in that way?

Dr. Baldwin: Yes, if it is not too bad. He reports some cases where he has even found pus at the time of operation.

Dr. A. J. C. Skene: Do I understand you that you removed an ovary that was cystic?

Dr. Baldwin: I removed a large cyst on the patient's right side; the other I did not remove. I punctured some cysts and left it.

The President (Dr. MacEvitt): To what do you attribute the pain which occurred on Christmas morning?

Dr. Baldwin: To threatened rupture of this ovarian cyst. It was one of those very thin-walled cysts that ruptured in the enucleation almost as soon as the first adhesion was broken, and contained inside a large clot of lymph.

Dr. R. L. Dickinson: Two or three minor methods of assist-

ance in those distinctly difficult cases that Dr. Skene has been kind enough to bring up for discussion to-night, might be mentioned. One of them, Kelly's device of distending the rectum with air so as to lift the small intestines out of the pelvis, is of service. He passes the nozzle of a Davidson syringe into the rectum, and then pumps the rectum full. Certainly it helps in cases where a non-adherent prolapsed loop of bowel in the cul-de-sac leaves us in doubt. In a case recently where I had a good deal of doubt whether there was a hydrosalpinx or an adherent intestine, the doubt was readily solved by putting the patient on a meat, egg, and fish diet for two or three days, and Dr. Palmer's capsules of charcoal, pancreatin, pepsin, and ginger, whereby the bowels were thoroughly emptied, and thereupon my loop collapsed entirely and disappeared. We overlook too often the administration of nitrous oxide gas. Dr. Brinsmade last night read a paper in these rooms on the subject, and I have often wanted to ask Dr. Skene why he abandoned the use of his apparatus.

Another method of diagnosis, going a little further with conservatism, is posterior colpotomy. A number of times this year I have opened the posterior fornix to get at a diseased tube and drain it and wash it out as we all have done.

I must confess to disappointment in all these conservative methods both in cleaning or washing the tube, even by Morris's method of opening the fimbriated extremity, and allowing the contents to discharge in that way, filling the tube with hydrogen peroxid in order to distend it, and try and open a passage through into the uterus. You remember how in his picturesque way he describes the bubbles fizzling out through the cervix uteri—a thing I have never been able to see. In my experience, a few Dudley operations on the tubes have resulted in two cases in certain adhesions in the neighborhood which have not been at all comfortable or satisfactory—a slight stump-exudate in one, and a considerable indurated mass directly over the cornu of the uterus in another, which leads me to believe that although the tube may look to be safe, we may infect the peritoneum in the neighborhood by that method. We have in the Brooklyn Hospital a resident pathologist who examines tubes and their contents microscopically, and determines in a few moments whether one can safely leave an open tube in the abdomen. That is a step in advance in such conservative tubal surgery.

As an evidence of mistake, if they are in order, I would like to instance a case operated on six or eight months ago by Dr.

Fowler: a firm, symmetrical, round tumor directly in the middle of the abdomen, with an attachment back of the uterus, with a pedicle supposed to be two inches long, was said to be a pedunculated fibroid. A consultation decided that there was little question about it. The patient was suffering severe pain, had a little collapse, and had a little pelvic peritonitis, though no extensive exudate. The belly was opened, and a congested, purplish, almost necrotic hydrosalpinx was found with one and one-half twists of the tube near the uterus, the interesting point about it being the symmetrical and very high location of the over distended, edematous hydrosalpinx.

Dr. Wm. Maddren: I regret that I did not hear the whole of the paper. I want to thank Dr. Skene for his very feeling way of describing the difficulties that he has encountered in evacuating these tubes and cysts. I want to ask him a question. When you empty a tube or cyst, like the one Dr. Dickinson has just described, or one that has a twisted pedicle, and is gangrenous, of course it has lost its elasticity, and does not hold around the aspirating tube; and it is a nice point you make to use your aspirator; I think it is an excellent scheme; do you use a small trocar simply to relieve the pressure, and then a larger one afterwards?

Dr. A. J. C. Skene: I use as large a trocar as I can. I should use for a cyst or pus-tube the size of my fist a trocar an eighth of an inch in diameter; the bigger the better.

Dr. Maddren: Provided you keep up suction at the moment of introduction—I think that is a very good point and will save life.

Dr. A. J. C. Skene: I was very glad to hear Dr. Dickinson speak of his disappointment in the conservative surgery of the tubes. That may be a little out of order, sir, but I would like to say that it is a great pleasure for me to hear an opinion on the subject, because I have not been quite satisfied that a tube can be saved or be even safe, to say nothing of useful, in case it has ever contained pus. I do not believe a tube can ever be made useful when its mucous membrane is destroyed by suppurative inflammation. In cases of hydrosalpinx I have seen good results from the conservative methods referred to, and I have fancied from the reports I have read of the wonderful results obtained, that I was doomed to be behind in this matter, but Dr. Dickinson encourages me to believe that I am not so far behind as I might be.

Dr. R. L. Dickinson: I do not wish to let my experience

stand against that of such a man as Palmer Dudley. If I remember rightly, he had 88 cases of conservative surgery of the tubes in which 14 subsequently became pregnant. (*Am. Jour. Obst.*, p. 16, Jan. 1898.)

Dr. A. J. C. Skene: I think Palmer Dudley's cases are perfectly trustworthy. I do believe, however, that the cases that were functionally perfect after treatment were not cases of advanced pyosalpinx; that is my impression.

The President: That is a most interesting point, I should judge, as to the condition of the ovaries or tubes on which this conservative action would be taken. With simply a salpingitis, an inflamed mucous membrane, resolution can take place, but with a pus-tube where the mucous membrane is infected from the uterus to the abdominal cavity, it does seem to me rather a foolhardy act to practice conservative surgery.

I would like to ask Dr. Skene, and other members of the Society, regarding the differential diagnosis where ptosis of the intestine exists. I have never had the good, or rather bad, fortune to see a case, and must admit my ignorance of the matter; but in bimanual examination made laterally why is it not possible to determine the difference between an inflamed or enlarged tube and this portion of intestine filling up the posterior portion or lying in the cul-de-sac? Can you not with your bimanual examination detect the enlargement on each side, and in that way receive aid in determining your diagnosis? Or what is the condition? It has been referred to this evening as the soft, elastic condition, the gaseous condition of this portion of intestine resembling hydrosalpinx or salpingitis. It does seem to me that by making a thorough and careful bimanual examination, getting the tubes and broad ligaments with their contents between your fingers, a differential diagnosis could be determined.

Dr. Wm. Skene: In the case I referred to in my paper there was a mass on each side, and it was adherent and overlapping the body of the uterus, and gave you that feeling when you made the examination.

The President: If that were true, then the exaggerated Trendelenburg position would not have much effect, because there must be adhesions in the case you describe. The position of the body would not change the position of the viscera, but the douching with water, and the administration of charcoal and bismuth, or the mixture alluded to by Dr. Dickinson, would expel the gas and cause collapse—the position would not.

Dr. A. J. C. Skene: I think it is possible to make a more accurate diagnosis in cases where the abdominal walls are not extremely tense, where one can make a reliable bimanual examination. I think one can detect the intestines low down in the sac of Douglas and most posterior portion of the pelvis, and then seize the broad ligament and the tube between the two hands, and outline it with the ovary; but in many of these cases, like the one reported to-night where the intestine is lying in the most dependent part of the sac of Douglas, and the uterus and broad ligaments are retroverted, it is extremely difficult to tell the one from the other. But, in case the uterus is in place, and the tubes and ovaries are in place, I have many times been able to make a diagnosis of prolapsus of the bowels by exclusion, finding the ovaries and tubes in the normal position.

The President: A point that has not been alluded to, is the differential diagnosis between appendicitis and hydrosalpinx, and pyosalpinx. I remember a case operated on by a surgeon in this city, who is almost a specialist regarding appendicitis. The case was diagnosed as appendicitis, and the abdomen being opened the appendix was found to be absolutely normal, but there was an enlarged and inflamed ovary. There are quite a number of cases on record where with the intention of doing an operation for appendicitis, a hydrosalpinx or pyosalpinx or ovaritis was found. The Doctor in his paper did not allude to the possibility of these errors.

Dr. L. Grant Baldwin: I inadvertently, in reporting my case, stirred up a hornet's nest in regard to conservative work on the tubes and ovaries, and to avoid a wrong impression being obtained of Dr. Dudley's ideas on this matter, I want to say a word further.

Dr. Dudley, in his paper, read something over a year ago, did not for a moment advise this operation for pus-tubes. It was simply for a chronically inflamed tube such as we had been in the habit of removing—as this one I described embedded in adhesions—but with no pus in the tube, and yet no marked disease—that is, a catarrhal inflammation. Dr. Dickinson may be in possession of some statistics later than his paper, but if I remember rightly, some 38 cases he reported at that time, and his paper when he read it before the Woman's Hospital Society, about October, 1896, was read from notes—the latter part of it. Whether he has increased that number I do not know; just how many became pregnant I do not know. I think in that list there were two cases

in which he ventured to leave a tube that contained pus, but not in the condition of the pus-tubes as shown here to-night. He had left those two, and they had done very well, but neither of the patients had become pregnant.

Dr. Dickinson: Was it in that paper that the statement was made that a great many pus-tubes contained sterile pus, and that it was safe to wash them out and leave them?

Dr. Baldwin: That was a paper read before the Woman's Hospital Society, about October, 1896. I do not know that that statement was made.

Dr. Wm. Skene: I have nothing to add, Mr. President; only to thank the gentlemen for their kind discussion of the paper, and to thank Dr. Dickinson very kindly for his lantern demonstration.

THE DIAGNOSIS OF ACUTE ABDOMINAL CONDITIONS.

BY WALTER C. WOOD, M.D.

In 1886 and 1888 Dr. Reginald Fitz of Boston published two articles proving conclusively the important rôle of the vermiform appendix in the causation of intra-abdominal inflammation. Acting on the principles there laid down, in 1888 Henry B. Sands performed the first successful operation for acute perforative appendicitis forty-eight hours from the onset of the disease. The influence of this operation has been widespread, not only in regard to the disease in question, but also indirectly to the surgery of acute abdominal diseases. From that date, celiotomy for acute conditions has occupied a large share of the attention of the general surgeon.

In 1884, Frederick Treeves' masterful monograph on "Intestinal Obstruction," had been published and its influence as a practical guide was being seen in the many successful cases reported from every quarter.

Operation for hemorrhage from rupture of extra-uterine gestation, beginning with Lawson Tait's case in 1885, has in the last decade become as imperative a duty for the surgeon as the ligation of a bleeding vessel in an extremity.

Abdominal sections for perforating ulcer of the stomach, duodenum, and even for perforating typhoidal ulcer have so many successful cases already scored to their credit that they are taking a permanent place in acute abdominal surgery.

Obstructions of the biliary passages, empyema, and ulceration of the gall-bladder occasionally require immediate surgical relief. In addition to the pathological processes already mentioned the traumatic surgery of the abdominal viscera is growing in importance.

Now, success in the treatment of these conditions can be obtained only by surgical means, and even that is futile unless a timely diagnosis can be made, and proper measures promptly instituted. In view of this fact, the profession of to-day no longer mask with opium the onset of every acute abdominal pain, but, together with the intelligent laity to some extent, demand an early and reasonably positive diagnosis whenever a patient is seized with acute abdominal symptoms. But the problem is always a difficult one because so many varying conditions give nearly the same initial symptoms. The self-limiting conditions, and those amenable to internal medications counterfeit the dangerous lesions requiring radical surgical relief, if a fatal result is to be avoided. Consequently, any practitioner doing surgical work is often called early in these acute abdominal cases to exclude, if possible, the strictly surgical diseases.

It seems to me that our methods of reaching a conclusion are often less thorough in these acute cases than in our consideration of abdominal tumors, where proceeding on well-defined lines we make a diagnosis by the scientific method of exclusion.

In *tumor* cases we gain our information first by a careful previous history, holding in mind the ever-useful rule that the first organ giving symptoms is probably the origin of the growth. Then, by inspection, palpation, percussion, and auscultation we learn many facts of importance, enabling us to group together all those tumors worthy of consideration. Then by exclusion we arrive at a conclusion reasonably correct. Although the data at our command in acute cases are far less suggestive of an exact diagnosis, I think it is by considering our cases along these same lines that we will gain an ability to make more accurate diagnoses. Our libraries give us first the pathology of a single lesion and then the symptoms. Clinically, I fear we too often attempt to interpret the symptom-complex by referring to a well known lesion instead of considering all the lesions that could cause the picture of acute suffering presented.

The sudden onset of prostration with vomiting, abdominal pain, and tenderness ushers in a variety of diseases. A rough classification that I have found useful at the bedside is the following:

1. Poisonings.

2. Colics—intestinal, nephritic, biliary, plumbic.

3. Intra-intestinal inflammations—gastro-enteritis—cholera morbus—typhoid.

4. Empyema of gall-bladder, appendicitis, salpingitis.

5. Perforative peritonitis—from ulcerations of stomach, intestines, appendix, gall-bladder, pelvic collections of pus, and perhaps urinary bladder.

6. Intestinal obstructions, strangulations by bands, including hernia (internal and external), volvulus-introsusception, foreign bodies, neoplasm with constipation.

7. Strangulated tumors from twisted ovarian pedicle, floating kidney.

8. Ruptured ectopic gestation.

In attempting a diagnosis before corroborative symptoms appear, some clue can often be obtained by careful inquiry into the *previous history*. A story of repeated attacks of so-called indigestion may often be elicited where the appendix is at fault. Lifting, straining, coughing, or the active peristalsis induced by improper food may suggest an internal hernia. A previous abdominal section raises the question of adhesions as the cause of a partial or complete obstruction. Preceding jaundice, or previous urinary abnormalities, point in characteristic directions. An occupation bringing the individual in contact with lead, or one of the less distinctive avenues of lead poisoning, irregular or delayed menses, a previous dysenteric attack, a constipation, and the injudicious use of cathartics, or a slowly increasing constipation or periodic intemperance in eating or drinking are points that may be omitted in the patient's story unless inquiry is made; but, if known, will simplify a diagnosis otherwise difficult. So many people date the onset of their illness at the hour of prostration, and confinement to bed, that the prodromal period of typhoid may not be mentioned, and yet if brought to light by inquiry, will clear the atmosphere of smoky indecision present in the mind of the examiner.

When traumatism is a causative factor, it is usually made prominent in the history, but I have noticed these three exceptions. First, when it has occurred under the influence of alcohol, *e. g.*, a case of hematoma in the right rectus muscle, caused by a ball in a bowling-alley, simulated an acute and severe appendicitis. Second, when the injury has not immediately preceded the acute symptoms, *e. g.*, a case of rupture of the ileum, due to a kick of a

horse, was reported by Wiggan in 1894, which did not interfere with the boy's usual occupation for twenty-four hours; also, a case under my care in Bellevue where autopsy showed gangrene, and perforation of the ileum eight days after a fall down stairs. Third, cases of rupture and peritonitis due to traumatism with no external evidence of adequate violence. Here the examiner does not give due weight to the history of the injury, and is apt to regard the case as one of simple contusion of the abdominal wall; *e. g.*, one morning last summer a man was brought into the Brooklyn Hospital who was said to have been kicked by a cow a few hours before admission. There was a slight bruise of the abdomen. His temperature was three-fourths of a degree below normal. There was slight abdominal tenderness. He seemed somewhat apathetic, which we assumed to be simply his normal mental condition. The case was not regarded as a serious one. During the following night he suddenly complained of severe pain and died before morning. Autopsy showed a rupture of the ileum, and a peritonitis so well advanced that it was evident the laceration of the bowel must have been co-incident with the kick.

By *inspection* of the patient more important data are gathered. Even early, the facial expression may give a clue to the seriousness of the abdominal condition. Perhaps an intelligent reading of a patient's expression is the basis of a so-called "intuitive diagnostic ability." The position of the patient is worthy of consideration. Peritonitis general, or even local, if septic, will usually anchor a patient, while the pain of intestinal colic or obstruction produces great restlessness. Pain is not always a good splint. The amount of distension of the abdominal wall is important and often misleading. The rule that intestinal paresis, peritonitis, and obstruction give a distended abdomen has some exceptions. I have recently seen a retracted abdomen in the shock immediately following a perforation of the jejunum; also, in a case of internal hernia of the small intestine; also, in a peritonitis with localized collections of pus. When the spasm of the abdominal muscles is greater than the force of the intestinal gases we get a retracted abdomen; also, continuous vomiting sometimes prevents abdominal distension. While a local fulness usually means a tumor, yet we must remember that a local septic process may give a tumor-mass even in acute cases, *e. g.*, an early appendicitis when the appendix is located just beneath the abdominal wall, and surrounded by adhesions.

While restricted movement of the abdominal wall during respiration is frequently seen, we occasionally note that the restriction is more limited on one side than on the other, thus indicating a local lesion.

Visible movements of the coils of intestines are so characteristic of a chronic obstruction that when seen in a case of acute symptoms, they must always indicate one of those peculiarly exasperating cases where symptoms of an acute type supervene on a chronic lesion, and should direct careful and renewed inquiry concerning constipation. Unfortunately, certain of these acute cases give no clue to the underlying chronic lesions, *e. g.*, a recently reported case of neoplasm of the colon entirely warranted the clinical diagnosis of appendicitis; also, a case of mine, in hospital a month for fractured ribs and hernia, suddenly developed acute obstruction and died on the table during an attempt to relieve him thirty hours from the onset. Autopsy showed a lump of feces, size of a hickory nut, plugging a stenosis caused by a radiating scar in the sigmoid flexure. Prolonged dysentery in the South some ten years before was the probable cause of this, and other scars in his large intestine which had never given him trouble.

By *palpation* we learn more definitely about our patient. Two symptoms are worthy of especial note: first, undue spasm or tension of the abdominal muscles or any part of them, pointing to irritation or inflammation beneath; second, local or general tenderness. A warm hand exerting steady and gentle pressure should systematically explore the whole region. A more satisfactory way is to move the hand and parietal wall together over limited areas of the abdomen in turn, rather than to move the hand over the parietal wall. I have found it useful to explore first the presumably normal parts of the abdomen. We gain thus the patient's confidence so that he will relax the abdominal muscles instead of contracting them to guard himself from pain, and also the important negative information of the absence of tenderness in certain localities. It is often necessary to go over the ground repeatedly in order to distinguish genuine tenderness from the hyperesthesia of a nervous patient. A board-like feel of the whole abdomen, or a doughy sensation may be found with general peritonitis, and no tenderness whatever. Our examination may, moreover, disclose the pressure of certain tumors which have no relation to the acute symptoms presented; *e. g.*, I was recently entirely misled by a pregnant uterus with vomiting then

present, but also co-incident with the duration of the pregnancy, and evidence of an impending abortion. The autopsy showed that the underlying cause of the entire disturbance was a gangrenous appendix. However, we find other tumors which *are* the cause of the acute symptoms. I have recognized the following: intussusception, ovarian cyst with twisted pedicle, empyema of the gall-bladder, a strangulated properitoneal hernia, ruptured extra-uterine pregnancy, appendicitis, and fecal impaction. In any obscure case a digital examination of the rectum must not be omitted. Intussusception and stricture can often be thus recognized. In women a vaginal examination is usually desirable in cases of a surgical nature.

By *percussion* we learn but little unless there is a tumor present. The fluid of a peritonitis or a hemorrhage I have never been able to make out by percussion. A bladder acutely distended may be the explanation of acute abdominal symptoms, and can be recognized by percussion.

By *auscultation* we can learn one very useful point in the differential diagnosis between those two very common conditions that so closely simulate each other, viz., mechanical obstruction and intestinal paresis. I have repeatedly verified the statement that active peristalsis of a mechanical obstruction, and the passive movement of the intestinal contents in paresis can be easily distinguished with the stethoscope. I believe that an entire absence of sound during a prolonged examination with the stethoscope means a paresis that will end fatally if the case is treated by surgical means. Although in theory the explosive vomiting of an obstruction differs greatly from the regurgitant vomiting of a paresis, yet clinically we see cases on mid-ground where classification is difficult.

A consideration of the causative factors present is helpful in making this differential diagnosis. I have seen paresis occur in three classes of cases; first, and most commonly, the variety due to sepsis. Not only in the cases of general peritonitis, but also in those cases of pelvic inflammation when a recovery can reasonably be expected, the persistent vomiting, and the unsatisfactory results of enemas have repeatedly led to a diagnosis of mechanical obstructions. I have recently been urged to operate in two such cases which recovered under treatment based on the diagnosis of paresis. Second, cases where pressure on the intestine has been removed, and the atonic muscular wall has permitted a ballooning of the gut; *e. g.*, in November at the Brook-

lyn Hospital I replaced by operation a very large strangulated inguinal hernia containing much of the small intestine in good condition. The following day the abdomen was extremely distended and vomiting almost constant. He received sufficient morphin to control the vomiting, $\frac{1}{20}$ gr. of strychnin hypodermatically every three hours for the atony, and calomel grs. xx in a single dose, which treatment relieved the condition, and I think proves the diagnosis. The use of these large doses of calomel for paresis of the intestines, I owe to Dr. John Byrne, and heartily endorse the treatment. I have seen the same clinical picture after the relief of intestinal obstruction due to adhesions.

Third, I believe occasionally paresis to occur due to defective innervation, and have seen one such case where the patient was a confirmed opium habitué. After a simple salpingectomy she developed general intestinal paresis and died the sixth day, the autopsy showing no peritonitis.

Having gone over an acute abdominal case in a systematic way, we are ready to group the facts obtained, and deduce a diagnosis. I believe that the diagnosis will be as often correct as in other departments of medicine, for I feel that through the whole range of practice, our mistakes are due less often to ignorance than to slouchy methods of examination. However, there are at least two types of these acute abdominal cases, where the diagnosis is especial uncertain; first, cases of partial or incomplete intestinal obstruction; and, second, where general constitutional symptoms entirely over-shadow the local signs. To illustrate, I will mention, in brief, the history of three recent cases.

In November, 1897, a hospital nurse came under my care. Three years before an ovarian cyst had been removed by abdominal incision. She made a slow recovery, having some sepsis. She had remained in good health until within two weeks of the present examination, when she began to have abdominal pain and constipation but kept at her work. She continued in this way until within two days when she began vomiting. This vomiting increased in frequency, and became almost constant. The bowels moved with enema, and she passed gas. The abdomen was not rigid and slightly distended with gas; she suffered with general abdominal pain, especially severe on the right side. A fixed spot of extreme local tenderness appeared, about the size of a silver dollar, situated at the outer edge of the right rectus muscle, about one inch above the level of the umbilicus. There

was no tumor. Peristalsis was vigorous. The temperature remained below 100°, but the pulse steadily increased in frequency up to 130, and became weaker. The bowels continued to move and there was no evident sepsis. The vomiting, pain, and increasing prostration, with the previous history led to a correct diagnosis of partial obstruction. Directly under the tender point adhesions were found binding down the transverse to the ascending colon, causing an angulation. The whole abdomen and pelvis were the seat of many adhesions, notwithstanding which there was no other point of obstruction. With care in diet, she is now free from abdominal pain. My regret in the case is that I allowed her to suffer such extreme torture for two days before I decided to operate.

A man of twenty was sent to me at St. Mary's Hospital late one night last summer with the written diagnosis of appendicitis, the result of several consultations. At a summer resort on Long Island he had eaten largely of unripe apples on the 27th of June, and within two hours vomiting and diarrhea began which had been checked with morphin. On the 28th the vomiting recommenced, and continued with severe colic pain, increasing in frequency and relieved only partially by morphine. He was brought to the city and hospital on the 29th, when he had a subnormal temperature, a pulse of 140, and expulsive vomit, a retracted abdomen, general abdominal pain, no local tenderness that could be made out, and was passing gas by rectum after an enema. It seemed like a case of partial obstruction, and on inquiry, he told of wearing a truss for a right-sided hernia until twelve years of age. Under the anesthetic, which was immediately given, a resistance could be appreciated above Poupart's ligament, but the inguinal and femoral canals were empty. An incision low down along the outer border of the right rectus showed a true properitoneal hernia of the first variety, that is, only the ring of peritoneum was concerned in the constriction. The location was that of the femoral canal, but the hernia did not enter the canal. The gut involved was only a portion of the circumference of the ileum, and the lumen of the gut was not occluded, the variety known as Littre's. It was necessary to incise the ring of peritoneum before the gut could be safely released. This first variety of properitoneal hernia is said to be rare (25 cases being recorded), and its etiology undecided. He made a good recovery.

A third case reported and shown at Bellevue Alumni So-

ciety, February 2, 1898, illustrates a statement of Mr. Treeves' that acute meningitis has been diagnosed when the lesion was intestinal obstruction. A girl of eight, indulged freely in cheap candy on November 15th. That night she vomited repeatedly, and suffered from abdominal pain. Vomiting continued on the 16th, and several cathartics produced no result. On the 17th a physician saw her for the first time, gave enemas with small but unsatisfactory movements. Medication failed to check the vomiting, and the abdominal pain was severe. When I saw her on the 19th, the history and diagnosis by her physician was intestinal obstruction, but that day she became delirious. We saw frequent convulsions in the face and arm muscles. Pupils were equal and reacted to light. Neck was rigid There had been no vomiting for ten hours. Abdomen slightly distended, seemed to be tender near the umbilicus. Temperature 99°, pulse 130. Some feces passed after the rectal examination. In short, the abdominal symptoms were less pronounced, and the picture was one of acute poisoning or cerebral irritation. An opium suppository quieted all the nervous symptoms, and the vomiting returned with abdominal distention and complete obstruction. I operated on the 20th, and found a Meckel's diverticulum adherent by the tip to the mesentery, and compressing an underlying knuckle of intestine. The child was remarkably quiet after operation, and has since shown no nervous or hysterical symptoms. Although a high temperature and eye symptoms were wanting for a diagnosis of meningeal inflammation, the case showed very little evidence of its true nature the day of my examination.

In conclusion, I append a brief surgical creed in reference to acute abdominal cases. All creeds these days seem subject to revision. This follows the rule.

I believe the following cases should be subjected to operation without delay:

1. All cases of acute appendicitis not improving within forty-eight hours. Improvement to be estimated chiefly by the local symptoms.

2. All cases of per-acute appendicitis even before forty-eight hours when local tenderness is extreme. These cases usually perforate.

3. All cases of apparently general peritonitis not already hopelessly lost. Although somewhat skeptical of some of the reported cures of general peritonitis by abdominal section and

irrigation, I am sure it is true that often the amount of peritoneal involvement is less than the clinical symptoms indicate, and extensive peritonitis *is* amenable to surgery.

4. All cases of local septic peritonitis whose origin is probably outside the pelvis.

5. Cases of persistent vomiting with general intestinal pain and a fixed point of marked local tenderness. It is often impossible to make an anatomical diagnosis in these cases but the lesion is usually amenable to surgical relief if not delayed too long.

6. Cases of profound collapse where the previous history is that of an abdominal disease. These are desperate cases, but I think some of us need more courage in these cases of probable perforation.

7. Any case of abdominal tumor (not fecal) presenting acute and alarming symptoms.

8. All cases of hemorrhage.

9. Any case with acute and alarming abdominal symptoms where a diagnosis is beyond a careful and competent examination, a true explorative section is positively indicated. I would protest, however, against the tendency to a free use of this means of diagnosis, without a most painstaking attempt to exclude those diseases not amenable to surgical relief. The laity must have more confidence in surgery, else its benefits will be frequently refused where it is competent to offer the chance for life.

NOTE.—In the discussion that followed, Dr. Fuhs said that in acute cases a chemical and microscopical examination of the vomit and feces would often disclose the chronic condition underlying the acute exacerbation then present.

THE FIRST NATHAN LEWIS HATFIELD PRIZE FOR ORIGINAL RESEARCH IN MEDICINE.

The College of Physicians of Philadelphia announces that the sum of $500 will be awarded to the author of the best essay in competition for the above prize.

Subject: "A Pathological and Clinical Study of the Thymus Gland and Its Relations."

Essays must be submitted on or before January 1, 1900.

For particulars, address J. C. Wilson, M. D., Chairman, College of Physicians, 219 South Thirteenth street, Philadelphia, Pa.

PROCEEDINGS OF SOCIETIES.

TRANSACTIONS OF THE BROOKLYN DERMATOLOGICAL AND GENITO-URINARY SOCIETY.

A case of erythema multiforme, presented by Dr. J. M. Winfield.

The patient was a woman, aged thirty-five. Four weeks before consulting a physician she had had slight rheumatic pains in her joints which had grown worse as the rash appeared. The eruption was located upon the legs and arms, typical as to location and color; in some places, however, the lesions had a circular arrangement suggestive of erythema iris.

The doctor apologized for presenting a case of such an easily recognized disease, but as it was in line with a paper by Dr. Colby, he thought it might serve as a suitable illustration.

Dr. Morton thought it an erythema multiforme—etiology, rheumatism. He spoke of a number of cases that had occurred here (Brooklyn) as a complication of vaccination. He considers the vaccination erythemas to be due to a reflex irritation, the toxic element acting on the spinal cord and so reflected to the skin, or the resultant fever causing digestive disturbances which reflexly produce the cutaneous lesion.

Dr. Jewett had seen a good many cases of vaccination erythemas during the smallpox epidemic in 1894, and thought the eruption was more apt to occur at the height of the vaccination eruption.

In reference to the vaccination erythema Dr. Winfield said that he believed they were due to a toxemia produced by the vaccine poison, or, as Dr. Dyer in a recent number of the London *Lancet* says, they are produced by the introduction of accidental germs.

Dr. Morton reported the histories of two cases illustrating what may give rise to spasmodic stricture.

I. A man (sailor) had difficulty in passing his water; had had gonorrhea. There was a pin-point meatus and hypospadia. Meatotomy was done; attempts to pass instruments failed; the obstruction was back of the bulbomembranous junction. Remembering a case reported by Otis, where a narrowing of the

meatus caused a spasmodic stricture, he considered this one of them. Under anesthesia a 30 F. sound was easily passed. Next day a sound was introduced without an anesthetic. The patient was relieved of all symptoms.

II. A young man, sixteen years of age; no history of gonorrhea; has been troubled for a year with nocturnal voiding of urine which had not been amenable to treatment. The doctor had introduced sounds only as far as the cut-off muscle. Patient anemic, pale, and admitted having masturbated. With some difficulty a full-sized sound was introduced; repeated the next day. Probably this case of spasmodic stricture was caused by the congestion following masturbation.

Dr. Morton said he had often seen cases of extreme urethral irritability caused by masturbation.

Dr. Thomas reported a case of a man, aged twenty-eight, who went to an ear specialist for deafness. This doctor thought it functional, due to loss of tone in nerve-supply. There was no apparent cause for this condition, unless it was due to masturbation. Patient denied having intercourse with women; said that during the past two or three years he had had no seminal emissions. Dr. Thomas examined the urine soon afterward and found it loaded with spermatozoa. The man said he had had a nocturnal emission the night before for the first time in years.

Dr. Napier presented a case of sarcoma involving both kidneys of an infant; also, photographs of the case, and of the kidneys after post-mortem. The child was thirteen months old when first seen and gave a history, according to the mother, of having had swelling of the abdomen for only a month. There was a smooth mass in the right side of the abdomen, its dulness continuous with the liver dulness above, and reaching down into the pelvis, and from an inch to the right of the median line around to the back as far as could be felt. There was another tumor in the left side of the abdomen, the upper limit at the lower border of the ribs, extending obliquely downward and toward the median line, the lower limit being nearly at the brim of the pelvis. This tumor was apparently four or five inches in length, three by three in width. This was slightly movable. The child was extremely emaciated. The mother said that the patient had passed the proper amount of urine which appeared normal. The appetite was poor, but the bowels regular; movements soft. During the observation of the case there was but one day when there was blood in the urine. At death (the child then fifteen months old),

the right tumor extended two inches to the left of the median line; the other tumor had also increased in size. Autopsy showed both masses to be sarcoma involving the kidneys.

Diagnosis microscopically confirmed by Dr. Thomas.

Dr. Jewett presented a case of vitiligo. The patient had been shown before the Society about a year previous; the doctor presented him again to demonstrate the rapid increase of the leucoderma spots. Nearly the whole body is now affected; the hair, which is firmly rooted, is growing white.

Dr. Morton remarked upon the difficulty in general, and particularly in this case, of assigning any definite etiological factor, and called attention to the fact that this case of vitiligo did not as yet show the usual tendency to reach a certain point and stop.

Dr. Sherwell called attention to the similarity of this disease and alopecia neurotica, and also to the fact that the former usually first appears upon the neck and face.

Dr. Manley presented a case of tuberculosis verrucosa cutis of the hand. History: William K., aged twenty-five years. Works in a crockery store. Scratched his right thumb with a broken nail some eighteen months ago while at his work. From the site of the injury an irregular verrucose margin has gradually but persistently extended, the enclosed area healing as the margin advanced until the area involved measured some two and one-quarter by one and one-quarter inches, occupying the dorsal aspect of the thumb as far as the distal joint.

Dr. Sherwell called attention to the fact that the disease is most common among the handlers of hides, butchers, herders, etc.; in fact, it is almost peculiar to this class of people, though the case under consideration seems to be an exception to the rule.

Dr. Colby presented a case for diagnosis. Kate O'B., aged twenty-six. Good family history. Had suffered from measles and numerous attacks of malaria. When eleven years of age she first had an attack of so-called erysipelas, attributed by her mother to a flea-bite. It started from a papule on the cheek, the swelling and redness extended until it involved the entire right side of the face, closing the right eye. It reached its height in twelve hours and entirely disappeared in forty-eight hours. During the early stages the lesion was of a bright inflammatory redness, gradually changing to a dark purple, and at this stage blebs were formed. There was no pain nor burning, merely a feeling as if the face would burst. Similar attacks appeared monthly

and continued until menstruation was established four years later; after this these attacks occurred but once or twice a year. In one attack the swelling involved the other side of the face; this was the severest and lasted two weeks. Six years ago the patient was confined to her bed eight weeks with scarlet fever. About seven months later, on awakening one morning she found her face much swollen, somewhat more so than it is at present. Never since that day has it regained its normal condition. No pain has been experienced. Numerous examinations of the urine have always shown it to be normal. Her appetite is poor. Bowels regular. The temperature at times had been subnormal. The face is swollen on both sides, more pronounced on the left. The lips are half again as large as normal. The nose is enlarged and flattened. The eyelids are swollen. The cheeks, eyelids, and lips have the appearance of being edematous, but feel infiltrated and hardened. The skin over the affected portion is waxy in appearance. No other part of the body is affected. For some time the patient has been upon thyroid extract, taking 5 grains three times daily. She suffered toxic symptoms upon a daily dose of 20 grains. She has lost seven pounds of flesh while under this treatment. The condition of the face appears to have improved.

Dr. Raynor thought it an angioneurotic edema.

Dr. Sherwell did not consider it to be a neurotic edema but was inclined to the belief that it was myxedema.

Dr. Winfield did not agree with either of the other speakers, but would not venture a diagnosis.

Dr. Morton was of the opinion that myxedema was out of the question; there was not the firm, thick skin, the hard, leathery feel, etc. Evidently something had interfered with the circulation, and this cause was undoubtedly connected with the repeated attacks of inflammation of the affected area.

Dr. Arthur C. Brush said it was unlike any case of myxedema he had ever seen; there was an absence of the leathery feel, falling of the lashes and eyebrows. The conditions seem more like a deposit of fat.

Dr. William Browning replied that he inclined rather to the belief that it was a sort of elephantiasis of the skin due to the repeated attacks of inflammation, and, perhaps, to a blocking of the lymphatics. Angioneurotic edema is usually transient. The fact that the case under consideration has been relieved by the administration of thyroid may be due simply to the fact that the general weight of the body has been reduced, and hence better absorption

permitted. Dr. Browning suggested as the possible cause of such a condition the blocking of the cavernous sinus, but said that were this the case, one would expect to notice enlarged veins as an accompaniment. These, however, were not present in the case under discussion.

Dr. Sherwell presented a case with the following history.

Man, aged seventy-six, with an ulceration upon the side of his nose. Two months before he had an abscess at this point which was lanced. This had probably been an inflammation of the lachrymal gland. The patient denies syphilis, and there were no symptoms of it apparent. When first seen there was considerable induration around the edge of the ulceration. The treatment has consisted of an application of mild calomel ointment. Under this mild antiseptic salve the infiltration had been much relieved.

In the case of ulceration of the nose, Dr. Raynor presented it as Dr. Sherwell wished to show by it how much benign growths resembled epithelioma.

Dr. Winfield spoke of these cases as the ones in which the quacks obtained their "cures of cancer."

Dr. Jewett was inclined to think it might turn out to be malignant, for he had seen cases of epithelioma of the face that appeared to have had their origin from a much less cause. He spoke of the degeneration that so often takes place in warts and moles in people about the age of the patient shown.

Dr. Raynor presented a case of alopecia areata.

Man, aged twenty-two. The patient also had several patches upon the legs as well as upon the head. Dr. Sherwell considered these cases due to a neurotic condition. The man had had an alopecia before which was finally cured under stimulating treatment. His occupation had been working in antimony, cyanid of potassium, and other deleterious drugs.

In the discussion of the case of alopecia areata there was brought out the difference of opinion which has prevailed among dermatologists on the causation, as regards its neurotic or parasitic origin.

Dr. Mosher presented a case of alopecia areata and paralysis of the right leg, the latter resulting from an anterior poliomyelitis.

There were several patches of alopecia over the scalp; one was the size of a dollar, and was located upon the left occipito-parietal region, and some smaller ones posteriorly. The skin over

the bare spots was atrophied, and the lesion was undoubtedly neurotic.

Dr. Winfield presented a case of anesthetic leprosy. J. D., aged nineteen. Native of St. Kitts, one of the West-Indian islands. The disease began when the patient was about eight years of age. The first lesions were like ring-worms in appearance. The center of the patches are completely anesthetic while the borders are hyperesthetic; the latter is especially marked in the newer lesions. The atrophic deformity is marked in both hands; the thenar and hypothenar eminences are completely atrophied. Tactile and heat senses are absent. The second toe of the left foot is nearly amputated from ulceration; there is a perforating ulcer of the right foot. The disease has remained stationary for the past four years. Treatment has been thyroid extracts, nux vomica, chaulmoogra oil, etc.

By request, Dr. Barber presented a case of syphilis of the nervous system, with the following history: Male, aged thirty-seven. Noticed, about fifteen years ago, a small "fester" under the foreskin, which persisted, with but slight annoying symptoms, "for two or three years, and was finally "burned out." Patient does not remember whether or not he received any internal treatment. Gives no history of any eruption, but said he thought his hair fell out in little patches, and a few "pimples" (description suggestive of acne) came out between his shoulders. Was "perfectly well" all the time. About one year ago a slight ptosis of the right eye appeared quite suddenly from no apparent cause. This condition cleared up in about a week. About seven months ago ptosis again appeared in the same eye. Thinking it would clear up he neglected treatment for a month or so, and then went to different dispensaries, where he was given "drops" that he increased from 1 to 15 per day. No improvement until a month or so ago, when he came under Dr. Barber's care, since which time he has been steadily improving under inunctions of mercury and iodid of potassium, internally, to the extent of 20 grains daily. When he began treatment there was absolutely no motion of the lid, and he had some pain in the tibia, especially at night. Present condition: Patient is emaciated (due to lack of proper food, he says), but feels well. The eyelid can be raised so that by tipping back the head vision is fairly good. There is external strabismus and a contracted pupil, which responds to accommodation but not to light. There is very slight glandular enlargement.

Dr. William Browning, who, with other neurologists, had been especially invited to discuss syphilis of the nervous system, was asked to open the discussion. He said: The diagnosis of syphilis of the nervous system is, perhaps, easy in uncomplicated cases; but if, as is often the case, this disease be coexistent with other conditions, as lead-poisoning, malaria, typhoid fever, etc., etc., etc., not only is the diagnosis of these extremely uncertain, but the treatment is very difficult. For instance, mercury is not tolerated by patients suffering from lead-poisoning. In typhoid, the syphilitic symptoms are usually quiescent until the fever runs its course. Syphilis and alcoholism are common and bad complications. One must be on one's guard against being deceived by syphilophobic individuals; especially those who have undergone "treatment" for a "hard chancre," "blood-poisoning," etc. In many cases such diagnosis and treatment have been deplorably wrong. In regard to Dr. Barber's case: Usually, as here, the whole nerve is involved. Occasionally, it involves the centers, and only one symptom is manifest. Ptosis, unilateral, is always a very suspicious symptom. As regards locomotor ataxia, the common teaching and belief is that all such cases are of syphilitic origin, and often from hereditary syphilis. The diagnosis of locomotor ataxia, however, should be carefully made.

Many cases of progressive dementia are due to syphilis. The speaker said that he had seen several cases of precocious progressive dementia, where the patients had started out in life apparently healthy, and where it has been very hard to get a clue. In later life progressive dementia is very often, if not always, due to syphilis.

The headaches of syphilitic origin are of great severity, but some are very much more suggestive, if not pathognomonic, of syphilis.

Among such cases are those of pain in the back of the head, accompanied by vomiting, and often an entire inability to swallow. Such attacks are often sudden and very grave. The patient cannot talk; cannot get medicine into the system properly and rapidly enough, and the disease is usually rapidly progressive. Usually the symptoms are bilateral, the lesions being central. The treatment must be energetic. Among the rarer conditions is found a gelatinous agglutination of all the membranes surrounding the brain; not, however, of a gummatous character. Sometimes it is possible to make out gummas of the brain; they may be rapid or slow in their manifestations. The speaker reported

two cases, one rapid and one slow, both of which cleared up when treatment was applied. The one of rapid development died six months after from dementia, due, probably, to permanent change that involved the brain substance. There is a question whether there is ever a specific implication of the nerve-tissue itself. In locomotor ataxia the lesions start in the posterior roots and progress inwardly. There is a condition of spastic paralysis that is pathognomonic of syphilis. Here there is a spastic condition below the waist line with sometimes wrist reflexes. Most of these cases can recover.

Dr. A. C. Brush said that Dr. Browning's remarks had been so comprehensive that but little was left for him to say. He reported several cases in which he had used, to good effect, the extract of thyroid, and that in some cases of nerve syphilis, this drug had a beneficial and curative effect.

Dr. Morton said in brief: The chief interest the subject has to dermatologists is as regards prophylaxis. He believes that if a reasonably good subject of syphilis be early subjected to a thorough course of hydrargyrum for one year, and this is followed by one-and-a-half to two-years' treatment with mercury and the iodid of potassium, there is practically no danger of tertiary manifestations; especially those referable to the nervous system. Patients often ask if a prognosis can be made from the appearance of the chancre. A large chancre with great induration may be considered a bad prognostic sign. On the other hand, a small, insignificant chancre may develop grave symptoms, but here, slight symptoms are apt to be followed by light, inadequate treatment. In cases where the disease manifests itself in cerebral endarteritis, in time an apoplectic attack is simulated. Such cases often do surprisingly well upon large doses of iodid of potassium and inunctions of mercury. In all cases, no matter what tissue is attacked, the above treatment is the proper one. Early primary nervous symptoms are accounted for in various ways, but are most probably due to toxins from the specific (though, as yet, undiscovered) micro-organisms of syphilis. This bacillary origin requires only time to become an established fact. He said he had no personal experience with the use of thyroid in the treatment of this disease.

Dr. Fraser reported a case of a man who had locomotor ataxia, but gave no syphilitic history. The father had never shown specific symptoms until he was fifty years of age, at which time the son was thirty-four years of age and had locomotor ataxia. Dr.

Fraser inquired whether this could possibly be a case of hereditary syphilitic manifestation.

Dr. Browning replied that if the symptoms of locomotor ataxia did not develop until the son was thirty-four years of age he was not inclined to lay any blame at the father's door, and asked if the diagnosis was certain.

Dr. Morton brought up the question of apoplexy due to syphilis, to which Dr. Browning answered that in one form they come on without particular or peculiar prodromata, and are probably due simply to the rupture of a weakened vessel from some cause; while in another the attack is preceded by violent headache, which is relieved immediately by the attack, as if some tension were relieved.

Dr. Fraser asked if it was not customary to use mercury alone in the third stage.

Dr. Morton replied that he had, after a careful perusal of all literature upon the subject, been convinced that the proper course was mercury and iodid of potassium. The theory of White, which he was inclined to believe, that at the end of the first year the febrile period of the disease is practically absent, and all that remains to be done, after a proper course of mercury during the time, is that the lymphatics eliminate such products as are left. To assist in this iodid of potassium is advisable to keep the lymphatics more patent.

MARK MANLEY, M.D.,
Secretary.

JAMES MACFARLANE WINFIELD, M.D.,
President.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

700th Regular Meeting, Tuesday, May 17, 1898.

The President, Dr. Joseph H. Hunt, in the Chair.

There were about seventy-five members present.

The minutes of the previous meeting were read and approved.

REPORT OF COUNCIL.

The Council reported favorably upon the following:

Bronislow Onuf, Univ. of Zurich, 1885.

G. Ashmun, L. I. C. H., 1896.

John G. Waldie, L. I. C. H., 1896.

Horace N. Sloat, L. I. C. H., 1887.
Charles E. Williamson, L. I. C. H., 1896.

APPLICATIONS FOR MEMBERSHIP.

J. J. Ashley, 905 Greene avenue, N. Y. Univ., 1884. Proposed by J. H. Hunt and J. M. Winfield.

Aurelius de Yoanna, 4 Third place, Univ. of Paris, 1893, Bellv., 1897.

Frederick W. Gilbart, 552 Madison street, Bellevue, 1897.

Henri A. Santoire, 148 Clinton street, L. I. C. H., 1896.

Arthur L. Reeve, 420 Gold street, L. I. C. H., 1896. Proposed by Membership Committee.

Thomas A. Mylod, 566 Washington avenue, P. and S., 1895. Proposed by R. J. Morrison and J. M. Winfield.

Patrick J. Mooney, 118 Kent avenue, Univ. of N. Y., 1893. Proposed by R. J. Morrison and J. M. Winfield.

J. E. Midgley, 488 Nostrand avenue, Trinity Coll., Toronto, Canada, 1886. Proposed by J. M. Winfield and D. Myerle.

ELECTION OF MEMBERS.

The following having been regularly proposed and favorably acted upon by the Council, were declared by the President elected to membership:

Wm. E. Thomas.
Sewell Matheson.

The President announced that the following had completed their membership since the last meeting:

Charles W. Perry.
D. A. Harrison.
Warren Schoonover, Jr.
John Joseph Kindred.

The President announced that the following members of the Society had gone to the front with the 14th Regiment:

John Macumber.
A. H. Bogart.
P. L. Schenck.

A communication was presented from the New York County Medical Society in reference to the annual meeting of the American Medical Association to be held at Denver, June 7th to 10th, and naming the arrangements for the Greater New York special train. On motion this communication was received and placed on file.

SCIENTIFIC BUSINESS.

"Bottini's Operation for Enlarged Prostate, with Report of Five Cases." By Henry H. Morton.

Discussion by A. T. Bristow, L. S. Pilcher, and W. C. Wood.

"Artificial Illumination." By L. A. W. Alleman.

Discussed by Arthur Mathewson.

On motion adjourned.

DAVID MYERLE,
Secretary.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

701st Regular Meeting.

The President, Dr. Joseph H. Hunt, in the Chair.

The minutes of the May meeting were read and approved.

REPORT OF COUNCIL.

Henry A. Santoire, L I. C. H., 1896.

Arthur L. Reeve, L. I. C. H., 1896.

Patrick J. Mooney, University of New York, 1893.

J. E. Midgley, Trinity College, Toronto, Canada, 1896.

APPLICATIONS FOR MEMBERSHIP.

Walter James Wellington, 1 Lincoln Road, L. I. C. H., 1896. Proposed by Membership Committee.

E. W. Candidus, 215 Hewes street, Kentucky School of Medicine, 1892. Proposed by J. L. Kortright and D. Myerle.

Stephen L. Taylor, Lewis avenue and Madison street, P. & S., New York, 1894. Proposed by H. Goodrich and H. B. Delatour.

ELECTION OF MEMBERS.

The following having been regularly proposed and favorably acted upon by the Council, were declared by the President elected to membership:

Bronslow Onuf.

John G. Waldie.

G. Ashmun.

Horace M. Sloat.

Charles E. Williamson.

The President announced that since the last meeting the following gentlemen had comsummated their membership.

W. E. Thomas,
John P. McQuillan,
Daniel C. Mangan,
and that the Treasurer reports two other gentlemen as having paid their dues and initiation, but not as yet having signed the by-laws.

The President announced that since the last meeting the following members of the Society had left for the front or were in active service:

Henry Wallace and John T. Gibbons, 47th New York Volunteers, at Newport, R. I.

H. D. H. Cameron, Troop C, at Camp Alger.

J. C. MacEvitt, Naval Reserve.

Also of those previously reported, that Dr. J. C. Macumber had been appointed surgeon in charge of the Division Hospital at Chickamauga; and A. H. Bogart and T. B. Spence, with the 14th New York Volunteers, at Chickamauga.

It was announced that the official stenographer of the Society, Mr. S. M. Butler, had received a commission as Signal Officer (1st lieutenant), and would shortly leave for the front.

SCIENTIFIC BUSINESS.

Paper by James P. Warbasse: "Brain Compression from Intracranial Hemorrhage, and Its Operative Relief."

Discussed by H. B. Delatour, Wm. Browning, C. F. Barber, and D. Myerle.

Paper by James J. Bowen: "Mouth Breathing."

Discussed by Charles N. Cox, T. A. Blake, W. C. Braislin, and G. A. Evans.

The President congratulated Dr. Bowen on the honor conferred upon him last week in the degree of A.M.

For the Building Committee, Dr. McNaughton reported progress, and called attention to the provisional subscription list, to which he invited the earnest support of every member of the Society. He reported that 55 subscriptions had been received of $100 each, out of the 100 necessary to make the subscriptions binding.

There being no further business, on motion the Society adjourned to the third Tuesday in September, 1898.

DAVID MYERLE, M.D., Secretary.

BROOKLYN GYNECOLOGICAL SOCIETY.

Stated Meeting, April 1, 1898.

The President, Dr. J. C. MacEvitt, in the Chair.

PRESENTATION OF INSTRUMENTS.

Improved Uterine Scissors.

Dr. J. C. MacEvitt: To economize that most important element in operating—time—and obviate the use of more than one instrument in a detail of abdomino-pelvic surgery, or where perforation is necessary in general surgery, I have devised the following improvement upon the ordinary uterine scissors: A fenestra is cut in both the male and female blade in apposition, of such a dimension that any ordinary drainage material may be passed through and withdrawn, while the end of any thick drain can be made to adapt itself to the size of the opening.

This improvement is of particular value in celiotomies where it is necessary to drain through the vagina. The cutting value of the instrument is in no way injured, nor are the blades weakened to a harmful extent. When the cul-de-sac has been perforated, the point of the instrument is free in the pelvis, where it can be threaded after the manner of the ordinary needle. Where it is desired to enlarge the opening by withdrawing the scissors with its blades separated, the drain can be passed through the fenestra in either blade.

I was led to adopt this device by the difficulty and annoyance often encountered in attempting to insert a forceps to secure the drain after the withdrawal of the scissors, contraction of the opening or displacement of the tissues so interfering with the entrance of the forceps that valuable time was lost.

In cutting up through the cul-de-sac in operations where drainage is necessary, as I have stated, it is often necessary to draw the drain down through the vagina, necessitating the use of forceps, and gentlemen who have had experience with that must have met with the difficulty that I have often seen encountered by others as well as myself.

DISCUSSION.

Dr. W. B. Chase: Mr. President and gentlemen:—I think all

of us have sometimes experienced difficulty in the introduction of an instrument from the vagina into the peritoneal cavity, and I see in the device of our President an instrument which will fulfil the indication exactly. The fact that you can make this instrument serve a double purpose is a very positive advantage. It seems to me nothing remains to be desired to fulfil that indication. As time goes on the value of gauze drainage into the vagina, in a very considerable number of cases, is becoming more and more appreciated, and, as suggested by the President, the time element is valuable and the minutes count a good deal oftentimes, at the very end of an operation.

Dr. MacEvitt: In your experience, Dr. Hyde, have you met with the difficulty of which I have spoken?

Dr. Hyde: Yes. Everything that goes to shorten an operation is valuable, even if it is one small thing. More than that, it is possible, as the doctor remarked in his description, that one might find considerable difficulty in guiding a pair of forceps through the opening which had been made with the scissors, the soft parts becoming displaced readily, so that it is quite possible to lose the way. The happy thought at which Dr. MacEvitt arrived in this invention, of threading his scissors with the drainage, and bring both right through at the same time, is to my mind an admirable idea, and its very simplicity is the beauty of it.

Dr. W. J. Corcoran: The only objection I have to make to this instrument is that it has not been invented sooner. I can remember many occasions when I was obliged to pass some instrument up through the cul-de-sac to make an opening where drainage was decided upon at the last moment, and then found we had to do it all over again to get the drain through. I can readily see how it would be of immense service to make the opening from below, passing the scissors in first, and then threading it and pulling it out. I think it would be especially valuable in cases where we have not decided on drainage until the last moment.

Dr. MacEvitt: It has occurred to me that you oftentimes find it necessary to pass a double ligature through a pedicle, and you can, instead of passing the ligature-carrier, thread your scissors and put your double ligature through in the same way.

Dr. Chase: I think, Mr. President, it would be of utility in other directions. We find not infrequently phlegmonous abscesses of the broad ligament amounting to very considerable effusion or

suppuration within the broad ligament, and neighborhood, in which it becomes desirable, in the first place, to evacuate the abscess through the right or left broad ligament. Sometimes adhesions have already taken place, and if you want to bore into an abscess one, two, three, or four inches, an instrument of that kind will not only come into play, but if you have occasion to pass it, as you may have, through the pelvic or external abdominal wall, if they are adherent, then you have the advantage of an instrument which will cut its way up, and secure your drainage as you withdraw it.

Dr. MacEvitt: The instrument can be obtained from Mr. Kaysan, who manufactured it for me.

Paper: "The Treatment of Incomplete Abortion in Unfavorable Surroundings." By W. J. Corcoran, M. D.

(Paper read.)

DISCUSSION.

The President: The subject of Dr. Corcoran's paper is one that not only appeals to the scientific specialist, but the general practitioner as well. I will ask the doctor to explain the applicator referred to; there is quite a knack in the filling of the tube.

Dr. Corcoran [exhibiting appplicators]: These tubes are fifteen years old. The paste is of such a consistence that it can be pressed into the tube until it is full and then the piston is introduced—of course, it is not necessary to use the tube full—and then applied in that manner [indicating]. I have brought both the metal and rubber tubes here, because I am a little fond of the hard-rubber one. After it has been in boiling water for some time it seems to adapt itself to the curve of the uterus better. It may be, however, that it is a little bit smaller.

Dr. J. W. Hyde: There is very little to say, Mr. President, except to express a warm appreciation of Dr. Corcoran's paper. It is the method that we have, all of us, or most of us, been in the habit of adopting in regard to that class of cases. We should every time say: "Curette; clear out the uterus thoroughly." The iodin-paste of which Dr. Corcoran has spoken is a great favorite of mine and I learned of it from the same source as he—from Dr. Byrne. I have relied upon it more or less for the past twenty years, and I presume there has not been a month in many years that I have not used it. I believe it is a paragon of value in local applications. It is absolutely aseptic. It is more than that—after the

first application it is soothing; the carbolic acid in it seems to have a pleasant and soothing effect, and I have never applied it (and I apply it to the uterus in large quantities, sometimes) but that the case in which I applied it acted very well. That is to say, I never had it produce any of the uterine colic that the doctor referred to as a possible condition from its use.

I was thinking, as the doctor read his paper, of a method I have used somewhat of late. He hardly approves of intra-uterine irrigation in those cases, a fact which I can understand very well, and I should adopt the same method as he, in those cases of very poor people where there are no proper means or assistance of which to avail one's self. There one feels comfortable and safe with the iodin-paste. But I have curetted and used permanganate-of-potash irrigations in those cases, with excellent results; probably no better than I would have got with the iodin-paste, but I have been using hot permanganate-of-potash irrigations in some cases of endometritis, and if I have any fear or doubt at all about the character of an abortion case, whether there is any possible sepsis present or not, I would not hesitate at all to irrigate with permanganate of potash.

I am very glad to have the doctor present this paper, because, as he says, it will go beyond the Society, right where we want to have it go—among some of the general practitioners.

Dr. W. B. Chase: Mr. President:—From the scientific and humanitarian standpoint I consider this one of the best papers ever presented to this Society.

I have no criticism to offer, having had little or no experience in such cases under such conditions. The method adopted to meet the indications present is entirely rational; it is consistent in every particular. I have never resorted to exactly this method of disinfection, if you please so to call it, of the uterine cavity, but it meets my hearty approval. I am more and more impressed with the value of iodin as a germicide and as a disinfectant, and certainly the addition of carbolic acid will not detract in any way from it, and it is in many conditions a favorite combination of mine in uterine disease. If a paste can be applied to the whole of the endometrium under conditions like this, where there is reasonably thorough curettage, it seems to me that if the deeper tissues are not involved, that so far as the cavity itself is concerned we are almost absolutely positive it will be left altogether ree of germs and of débris which will be troublesome or dangerous. I want to congratulate Dr. Corcoran on the wisdom of

his paper and the admirable method which he has adopted for the relief of suffering women, under such conditions, seemingly so helpless.

Dr. J. E. Langstaff: I would like to ask, Mr. President, in regard to the temperature. In a septic case, of course, there is a rise of temperature. If the temperature rises after the operation would he irrigate or would he reapply the paste—if there was sepsis on the second or third day—or would he curette over again?

Dr. Henry P. de Forest: Mr. President:—The reader of the paper has furnished us with a text and I doubt not that every one here could deliver a sermon on the subject; but even if we did the subject would not be more clearly presented.

There is one point of technic which I have adopted and which I believe to be of benefit in such cases. I carry with me on all cases of this kind, and also to my obstetric cases, a dress-suit case which exactly holds a douche-pan, and I find where the bed has to be used, especially in the poorer classes, that the douche-pan acts almost as well as a table, gives a firm base for work, and is extremely comfortable With the aid of a fountain-syringe one is able to secure as good irrigation as could be desired. I do not mean that I always use irrigation, but in those cases where it is necessary the douche-pan is a very valuable addition to one's armamentarium.

In a large number of these cases, would not the mere packing of the vagina with iodoform gauze after curettage secure equally satisfactory results, without attempting to disinfect the endometrium?

Dr. Geo. McNaughton: I am very sorry not to have heard the paper, Mr. President, and I would just speak of one point that has not been mentioned in the discussion, but which may have been made emphatic in the paper. I see quite a number of cases where the uterus has been curetted and an application has been made to the endometrium, but the septic process has extended further; when one can, by careful examination, make out peri-uterine inflammation—lymphangitis. It seems to me in this class of cases I would hesitate in applying a cauterizing chemical like iodin or carbolic acid. I used to, but stopped, because I thought it sealed up some vessels. It may be that the combination which the doctor mentions does not have that effect, but it has seemed to me unwise and I have stopped doing it, particularly where there is some tenderness about the uterus and where

one can feel thickening—where one is quite certain there is peri-uterine inflammation. I believe under these circumstances the best treatment is to secure the best drainage—it is too late to curette. It certainly does not relieve the trouble, and sometimes, I believe, it opens up new channels for the systemic infection.

Dr. Van Glann: I have nothing particular to say. It interests me because I think it is a very practical method. I have always douched the uterus. I have never used the paste, so I cannot say anything about it.

Dr. Shoop: In the same class of cases to which Dr. McNaughton referred—those cases in which the septic process has extended farther than the endometrium—the use of an intra-uterine douche which is too hot will have as bad an effect as the application of a cauterizing chemical. The very hot douche contracts the capillary blood-vessels and lymphatics, not only arresting the free discharge of blood and other fluids from the abraded surfaces, but actually drives such septic-laden fluids deeper into the tissues, for absorption into the general circulation. This accounts for the chill and hyperpyrexia so often reported as coming on immediately or soon after using a hot douche in such cases. A temperature of 100° to 105° F. for the douche would favor freer drainage.

Dr. MacEvitt: I am in most thorough accord with the treatment of Dr. Corcoran, which is one that I have followed for years. The paste I am familiar with, and the method of application. Sometimes in emergencies we are called in where we are are not so prepared. and I have a case now most applicable to the subject. This is Friday. On Wednesday night my brother was called to attend a case of abortion between the second and third month. The fetus was delivered and quite profuse hemorrhage followed, but upon examination no presence of membranes was to be felt protruding at the os. The hemorrhage had been quite severe. He packed the vagina with two layers of iodoform gauze and gave a dram of ergot. On the following morning I called to see the patient and found her in good condition. No blood had permeated this dressing, which I removed. It was absolutely odorless. Upon introduction of my fingers I found the large mass of membranes presenting at the os, but still adherent. I dissected away as well as I could with my finger and removed it. I felt there was the possibility of some placental tissue remaining, but you have all had the experience, I know, that

most of these cases get well without any more than ordinary precautions being taken regarding the matter of cleanliness. I should judge ninety per cent. of cases will get well without any treatment whatsoever. The woman felt particularly well and had no temperature. I simply ordered a vaginal douche of about three per cent. carbolic acid to be given. I called again to see her in the evening and found her temperature 102° F. She was in a nervous condition, being of a particularly nervous temperament, and I did nothing more, which I now regret, than to order a second vaginal douche. This morning I called and found she had passed a sleepless night, with a temperature of $104\frac{2}{5}$° F. She had all the appearances of being septic, and gave a history of chill. I then sent for my instruments, secured a nurse, placed her on the table, and douched out the vagina and uterus, bringing away a fetid discharge and some membranous shreds. I used the blunt curette and feeling I was unable to remove all the tissue in that way, I used a sharp curette—not an absolutely sharp one, but one used considerably and its edges somewhat dulled—and removed quite a large quantity of placental material. That was at twelve o'clock. I called again to see the patient at seven o'clock, two hours after the removal of the placental tissue—I should say that after removing the placental tissue I irrigated the uterus with a three-per-cent. solution of carbolic acid, using about half a gallon of water, so as to thoroughly irrigate and clean it. At half-past three, according to the nurse, the temperature was down to $103\frac{1}{4}$° F., and at seven, when I called, it was up to $104\frac{1}{2}$° F. I placed her on the table again and irrigated with the same solution of carbolic acid—three per cent.—and ordered an antipyretic. What the condition will be to-morrow I do not know. I doubt whether I would have used iodin-paste in this case even if I had had it. There is a possibility in my mind that there is still some little placental tissue remaining, and if I do not find a marked reduction in the temperature to-morrow I shall then again curette and may then possibly introduce the paste. Sepsis can take place from the absorption of even a small portion of this placental tissue remaining. It is a very difficult matter to thoroughly clean out a uterus of this kind, and yet, from a very small portion of the tissue there we can get septic absorption. I believe the woman to be septic at the present time—systemic sepsis. I am very anxiously awaiting the morning to see this woman's condition. I have seen cases before,

running a high temperature, which, with simple irrigation, dropped almost to normal within twenty-four hours.

Dr. W. J. Corcoran: In regard to the question of irrigation, we must remember the class of cases I was treating and the surroundings. I am speaking from the standpoint of the doctor who goes in to attend a case alone. He has no nurse; he does not know what kind of germs the people who are around are going to bring to him, and it is better for them to be out of his way. The less labor he has to do the better. If we can get along just as well without irrigation we are avoiding one source of danger. I would not dare to use any fountain-syringe without boiling it; you do not know what it has been used for, or where it has been; it is not clean—that is one fact you can be sure of, and that is the only fact—and if we can get along without its use we are avoiding so much danger. The package of gauze is laid on the floor and a piece of that clipped off with the scissors, and the uterus swabbed out with the gauze, which you know to be sterile. The only danger is the one of carrying contagion from the external genitals and the vagina into the uterine cavity, and that is why I use the paste—to seal up the absorption and also to destroy any infection which I may have introduced or which may already exist there in septic cases. As a rule, I do not use any antiseptic, but when I do, I am very fond of lysol, for the reason that it is a clean soap. I do not rely on antiseptics in such cases; I think boiling water is as good as anything.

A rise of temperature after an operation such as I describe, to me, with my experience, would prove I had made a false diagnosis; that it was not putrid infection from decomposing materials, simply localized, but infection that had already gone beyond my reach; and that applies to the point made by Dr. McNaughton, where the infection is all septic, where the germs multiply so readily and are absorbed so readily that they are already beyond the surgeon's reach, and there is really no local point of infection which he is able to remove. There the curette will do harm, and I believe even irrigation does harm by opening up new absorbents, giving it a fresh start, and allowing the infection to be more generally absorbed into the general system. Under the circumstances I describe I would simply insist on the removal of the patient to the hospital, and if she would not go I think I would give up the job and tell her to drink plenty of whisky and trust to Providence for the result.

The douche-pan is very handy, as Dr. de Forest says; you

can bring your fountain-syringe and you can sterilize both before you leave your office; but this is a question of labor which I am trying to simplify for those gentlemen who have to handle emergency cases and cannot devote two or three hours to the preparation. The idea is to get down to the safest point for the patient, a treatment which will best insure her safety, and the least work for the doctor.

The packing of the vagina only, to be left there as Dr. de Forest mentioned, might be successful, and generally will, if you are thoroughly aseptic in your handling of the interior of the uterus. If you leave nothing behind, the dry packing of the vagina will be perfectly safe. The only question is: Have you, or have you not, introduced any new infection into the uterus? There is where we have an advantage in the iodin-paste, that even if we are not thoroughly aseptic—and it is almost impossible that we should be—we are practically safe, and we leave an aseptic and sterile uterus behind when we are through. There is at least no more infection than you found when you got there. Of course, it is quite possible for a gentleman who handles a case of this kind to go through a regular operation in the same way as in the hospital, but to do that he will have to call in help. If he is on good terms with his neighbors he can ask them to come in and help him scrub, and wash, and boil, but I can distinctly hear their prayers for the repose of his soul.

NARRATION OF CASES.

"Pendulous Abdomen in a Pregnant Woman." By Dr. Joel W. Hyde.

(History and photographs of case submitted.)

DISCUSSION.

The President: The subject of pendulous abdomens in pregnancy is an interesting one, and particularly interesting is the one presented by Dr. Hyde. We should like to hear any remarks upon it.

Dr. McNaughton: Had Dr. Hyde seen this patient previously?

Dr. Hyde: I had seen her.

Dr. McNaughton: This condition was not present at her previous confinement.

Dr. Hyde: It was not. I attended her at her confinement about five years previous to this, but I did not see her for months

prior to this parturition. I had no opportunity to investigate the case at all.

Dr. McNaughton: Were all the muscles wasted?

Dr. Hyde: Yes; the emaciation noticeable in that picture is not one whit overdrawn; and as that pendulous abdomen lies down on her thighs—it is just as she was by measurement when she was lying in bed—I think I could have measured that when she was standing and found the pendulous abdomen would hang at least an inch or an inch and a half lower than it appears there. I took a great deal of care in having the drawings absolutely exact, to represent not only the great emaciation but the relative size and appearance of the abdomen as it was in her case.

The formation of the child is delineated there, and also the pelvis, in dotted lines, simply to show the relative position of the child's head to the superior strait; because, as I passed my hand up into the cavity of the pelvis in making the examination, I found nothing whatever there. The pelvis was empty and I passed my hand up over the symphysis, and I then came upon the occiput, which I represent as lying on a line with the summit of the symphysis, while as an actual fact I did reach over a little to get to it.

Dr. McNaughton: I was going to say, Mr. President, that this is pregnancy occurring in a diseased woman. That, of course, I think, must be admitted. It is very interesting. I have a male patient whose abdomen will drop to an uncomfortable and unsightly extent, and he is a very slight-built man. That man's arterial condition is the cause of his trouble.

BROOKLYN SOCIETY FOR NEUROLOGY.

Regular Meeting, Held April 28, 1898.

Dr. A. C. Brush, President, in the Chair.

Dr. Haynes presented a case of amaurotic family idiocy in a girl, aged sixteen months, with a good family history, and showing the classical symptoms of mental impairment, spastic paralysis, nearly total blindness, with the characteristic changes in the macula lutea, evidences of rachitis and emaciation usually ending fatally at about the age of two years.

Dr. Joseph Collins of New York, by invitation, read a paper on "The Symptomatology and Therapeutics of Arterial Degeneration," in which he showed by argument and illustration how the

sympathetic nervous system presided over the functions of vegetative life, the disturbances of which led to arteriocapillary fibrosis with its various systemic and organic terminations.

W. H. HAYNES, Secretary.

BROOKLYN PATHOLOGICAL SOCIETY.
THE 394TH REGULAR MEETING.

March 10, 1898.

The President, Dr. James P. Warbasse, in the Chair.

The program of the evening was provided by Section I.: Dr. J. C. Shaw, Chairman, and Drs. Ager, Bogart, Butler, Cornwall, de Forest, Harrigan, McCorkle, Meyersburg, Peele, Rhodes, Stuart, Wallace, Ashley, and Lewis.

There were fourteen members present.

PRESENTATION OF SPECIMENS AND PATIENTS.

ABNORMALITY OF MAMMARY GLAND.

Patient presented by Dr. Mary De B. Ingram.

Dr. Ingram: Mr. President and members of the society: I bring to your notice the case of a woman who has a supernumerary nipple. It is situated on the left breast below and to the inner side of the normal nipple. Though very small, it is functional and presents most of the characteristics of a normal nipple; it has the areola well marked and the sebaceous follicles. She is a Scotch woman and has had six children and two miscarriages. Her first two pregnancies were twins. At the present time she is nursing her little baby and when she is nursing, the milk flows quite freely from this nipple also.

DISCUSSION.

Dr. Shoop: Do you intend to operate on it?

Dr. Ingram: No; it does not give her the least trouble.

Dr. Shoop: Does the child nurse from this supernumerary gland?

Dr. Ingram: No; she never has used it, but the milk flows from it.

LIPOMA.

Specimen presented by Dr. John R. Stivers.

History: This specimen of fatty tumor was removed from the

palmar surface of the ring finger of the right hand. The patient, a male, forty-eight years old, said the tumor had been growing for twelve years, but had been of slow growth until recently. During the past eight months it had caused him a great deal of pain and on account of its size had interfered with the use of the hand. The tumor was removed under general anesthesia on February 24th, two weeks ago to-day, and the patient has since been able to resume his work.

The tumor is long and thick. It is encapsulated. On section it proved to be a lipoma.

OVARIAN TUMOR.

Specimen presented by Dr. Frances Peele.

History: This tumor was removed from Mrs. L., an Italian, aged twenty-seven, mother of four children; last child born about four years ago; she dates all her trouble from that time. When I first saw her she complained of pain in the right ovarian region and the pain was so continuous that she was obliged to give up her domestic duties; she walked bent almost double, and her side was drawn to the right. I operated on her and took out this ovarian tumor 10 cm. in diameter. The operation was done at the house of the Italian under the best antiseptic precautions that could be made. She made a very rapid recovery, her temperature not going above 101° the first day and afterwards falling to normal. The interesting feature of this case is that before closing the abdomen we examined the ovary upon the opposite side and found there also a cystic condition. There was a cyst about the size of a walnut; this was opened and thoroughly cleansed. The woman became pregnant about five months after her operation, and this month expects to be delivered of a full-term child.

DISCUSSION.

Dr. Warbasse (the President): This ovarian tumor which the doctor presents is interesting on account of the excellent result which she secured under adverse circumstances, the Chair takes this opportunity to congratulate Dr. Peele upon the result secured, and also upon her thoughtfulness in making an examination of the other ovary. It is a surprisingly common observation among surgeons who open the abdomen, that interest upon the particular organ diseased, for example, a diseased ovary, that when the particular organ has been operated on they regard the operation as finished and close the abdomen. There seems a sort of auto-

hypnotism, the surgeon's mind being so concentrated on this particular organ that he is after, that when he gets it out his mind follows it right out of the abdominal cavity and he is done with the abdomen from that time. It is a matter worthy of note that Dr. Peele went so far as to examine the other ovary and although the lesion found in that particular ovary was small, still it was remedied.

HYDROCEPHALIC BRAIN.

Presented by Dr. J. C. Cardwell.

History: This is merely a hydrocephalic brain of an infant five weeks old. I do not know whether there was anything peculiar about the history of the case, as I got the history from Dr. Burr the attending physician. I made the post-mortem The symptoms began at the age of two weeks. Parents healthy; no history of tuberculosis anywhere in the family, or history of any nervous or other disease. The child died at the end of three weeks. The only point of interest in the history that I could get was that the enlargement was very sudden. I do not know whether this enlargement of the head could develop in a few hours. It struck me as a rather good specimen because of the extreme thinness of the cerebrum in places. There was over a quart of liquid which came out, which was not examined. The brain has been cut into and handled considerably. The frontal lobes of cerebral tissue are quite thick, and at the convexity there is scarcely anything except dura mater, but if you rub your finger over it you can see some nervous tissue still is present. The distension extended back through the aqueduct of Sylvius and into the fourth ventricle and even pressed upon the cerebellum and extended up into the cerebellar lobes.

DISCUSSION.

Dr. J. C. Shaw: I asked Dr. Cardwell to present the specimen. He had shown it to me and it struck me it was a very unusual one because of the thinness of the brain substance. I have often examined hydrocephalic brains but I have never seen one as thin as this one, almost like tissue paper, and so largely confined to the frontal lobes. Dr. Cardwell had asked me why the frontal lobe is so much thinner than the other parts of the cortex. That is the usual thing with hydrocephalic brains; one notices that the forehead is very often protruding, especially in very young children. I suppose that is so because the fluid finds less resistance in the frontal lobe, of course the ventricle there being larger, and

the resistance is much greater behind; then the cavity, the fourth ventricle, etc., is small behind and does not allow the fluid to pass so readily and therefore expands the frontal lobe more readily than anywhere else.

The President: Possibly Dr. Shaw will give us the advantage of his discussion on the prognosis in these cases and whether or no there is any treatment that has been of any avail, in order that we may know what we should tell the parents of such children.

Dr. Shaw: The prognosis differs much with different cases. Of course when it occurs very early in life and is an active process the children all die, as this one did. When it is a much slower thing or when the obstruction is less, of course they very frequently live. It is a common thing to see these children live; some recover with very large heads and are often quite bright mentally; some are unusually so. The majority of them are mentally weak and are likely to have some convulsions afterward. I do not think there is any way of treating these cases. I know that puncture has been done, and recently I think some surgeons have been rather inclined to do lamnectomies, cutting out pieces of the skull, but I do not think any of those operations have been of the least service. I do not see how they can possibly be of any service, and if you puncture and draw off the fluid it is sure to collect again. So I do not think anything can be done in the way of remedies, and even the method of compressing the head which has been adopted has never given any result at all.

The President: Can Dr. Shaw enlighten us on the etiology of this trouble?

Dr. Shaw: No, Mr. President, I cannot. I am sorry to say it is one of the parts of nervous pathology with which we are not at all familiar. My own idea about it is that it is perfectly obscure. Tuberculosis, which is often thought to be the cause, I do not think has anything to do with it, because you can often examine those brains and not find any evidence of tuberculosis. Dr. Browning, who has done some work in that direction, thinks that not infrequently there is some obstruction to one of the openings, the foramen of Monro, for instance, and the aqueduct running down into the cord That, of course, might give rise to the internal hydrocephalus, but there must be some explanation for that more than ordinary abnormality; there must be some diseased process going on, but, so far, nothing has been learned as to what the true nature of the early process is

and why the hydrocephalic condition is kept up. It is a very difficult subject to work out. Within the last five years an Englishman writing on the brain gave a review of the subject, but after you had gotten through the whole article you knew about as little as before you began. It is a very unsatisfactory treatise and yet there is no doubt all the data were there given.

Dr. Cardwell: I would like to ask Dr. Shaw, or any one who may have the information, if he thinks that dilatation as given in the history could have been rapid. From the specimen, it seems to me that it could hardly have been very rapid; that is, within an hour or two, otherwise we would have some evidence of tearing there. Of course the tissue is now divided, but as I saw it immediately after it was removed the tissue, as far as there was tissue, held together strongly and did not show any evidence of having been torn or pulled apart.

Dr. Shaw: I suppose that statement was made to the attending physician by the family.

Dr. Cardwell: No; he said he saw it.

Dr. Shaw: It might have been rapid, but it must have taken some hours. When I hear a statement of that kind I always feel not like making any criticism, because so often things happen that we cannot conceive could possibly happen. Theoretically, I do not see how it could happen even if there were a very sudden blocking up of the passages to the fluids. I do not think it would tear even if it had occurred rapidly, because the cranium outside gives a certain amount of pressure that would prevent the tearing.

TUMORS OF THE LATERAL VENTRICLE OF THE BRAIN.

Microscopic sections presented by Dr. J. C. Shaw.

History: In the first of these tumors the man was about forty-five years of age who complained of paroxysmal attacks of headache. The headache was generalized and strange to say it sometimes disappeared entirely for months, and then he would have a very severe attack so that he was unable to do his work and had to stay in the house. He had no other symptoms. When he was free from headache he went about quite naturally. I saw him for a year or two at intervals and always when he had these headaches. The termination of the case was this—and it was an odd termination in the light of the previous history. He began to have one of these severe paroxysms of headache, I think perhaps more severe than it had formerly been, and then I noticed that he was a little dull, I thought this was probably the result of the extreme pain,

but I then began to notice that he held his head bent forward. After a day or two I found it was impossible for him to raise his head to the vertical position at all and the neck-muscles were evidently paralyzed. He never developed any paralysis anywhere else except toward the very end, within a few hours of his death when he became more and more dull and then passed, within a few hours, into a rather stuporous condition. Then there appeared to be some generalized weakness. I think it was probably a generalized paralysis, but it would have been very difficult to have made out whether it was paralysis or simply weakness from the advancing disease, unless I had previously observed this paralysis of the neck-muscles which made him hold the neck forward. He became quite comatose, the pulse beating rapidly but feebly and the pulse entirely ceased, ceased before the respiration.

When the autopsy was made there was apparently, to the naked eye, nothing wrong with the brain. There was a slight thickening of the pia but nothing unusual and nothing more than one ordinarily or commonly sees, but in the posterior horn of one of the lateral ventricles—I don't remember which—there was a small mass the size of a large English walnut. It was hard and was attached to the terminal end of the choroid plexus. The tumor, of course, I cannot present because it has been cut in pieces, but that description will answer. It was rather dark in appearance. The interesting point, other than the histological study of it, is this: Was this tumor the cause of the man's death, and if so, why was it? The explanation is this: that the position of the tumor in the posterior horn of the ventricle was in just such a place as to allow the tumor, as it weighed down and came in contact with the floor of the venticle, to thin it out as it were, to give rise to a certain amount of necrosis in that part of the brain substance, and then by and by the tumor pressed upon the quadrigeminal bodies, pressed upon the base of the brain, and it was this pressure on the mid-brain which gave rise to the stuporous condition, to the paralysis in the muscles of the back, and finally to the general paralysis, that is, paralysis in all extremities, the back as well; and ultimately caused by the stoppage of the heart the pressure on the centers in the medulla oblongata.

In the other case the patient was a young boy of about sixteen. He began by having attacks of what appeared to be epilepsy; in fact, they were looked upon as epilepsy. They continued at intervals and some three months before I saw him he began to have a tremor of one arm; a peculiar kind of tremor which is seen after

certain forms of paralysis. It was something like the tremor in paralysis agitans; of course not exactly like it, but that kind of tremor, nothing rhythmical about it. The epileptic seizures, I will call epileptiform now, because they were something more than true epilepsy or idiopathic epilepsy, ceased for about five months, but the tremor continued. There appeared to be but little weakness on that side, but it was very trifling indeed. I had shown the boy at the college, and one day his mother came to me and told me he was unable to get up and asked me to go and see him, I promptly did so and found he was in bed and that he was somewhat stuporous, the conjunctivas were injected and there was a good deal of secretion about them. He could not rise from the bed; he could not turn over, and that had come on within twenty-four hours. I could rouse him, but with some difficulty. I then found he was unable to hear in one ear; I think the ear on the same side in which he had the tremor. He did not have the same dropping forward of the head that the man had, but all the muscles of the back were paralyzed and he was unable to sit up at all. He could use his hands and legs moderately and very much more so than he could use the muscles of his back. He remained in that stuporous condition and died within about four days after the onset of that peculiar group of symptoms. I persuaded the mother to allow me to make an autopsy. I was unable to accurately locate any lesion in this particular case, but the curious thing about the tremor was that after he had got to bed and this weakness began, the tremor entirely disappeared.

Dr. Barber assisted me with the autopsy and we found the posterior horn of one ventricle enormously distended with fluid, and a mass in one of its walls connected with the choroid plexus. There were little bands of tissue from wall to wall of the ventricle. I took out that part of the brain but I am unable to present it now, for the reason that it is soft tissue and it is not embedded in the celloidin sufficiently long to enable sections to be cut from it.

There is a great similarity between the two cases, particularly because the symptoms in both appear to be caused by pressure on the mid-brain. In the second case the tumor with the enormous hydrocephalic distension of that ventricle pressed on the mid-brain and caused the same symptoms, the same paralysis of all the muscles, the same stuporous conditions, and finally the pressure on the medulla caused death. These cases were seen some years ago, and all the subsequent operations have tended

to show that whenever we get lesions that press on that part of the brain—the mid-brain, where the fibers are all coming together —we are going to get generalized paralysis. The study of the cases and the symptomatology so far as I have given them to you, add nothing to our information as to the diagnosis of the lesion in the ventricle. If you saw a case to-morrow it would be impossible to tell whether that trouble was in the ventricle or not, but we could say from those symptoms that the pressure was in the mid-brain. And we have the same thing when we have a tumor in the vermis of the cerebellum; we get later on paralysis of all the muscles and if the tumor is on one side of the brain entirely, of course we get hemiplegia.

I have been some time making a study of the specimens, because my time for that kind of work is limited and because the specimens have been rather difficult to examine on account of their condition and partly because one is not in the habit of examining the choroid plexus. At first I was a little puzzled with them, and I must admit that even to-day I do not feel that I have studied them as fully as I would like to. The tissue is made up largely of connective tissue bands which are common to the choroid plexus; when those bands are cut longitudinally they are not so puzzling, but when cut crosswise and a little granular material is found in them, at first sight you do not know what to make of them.

I have made a number of sections and at first I was rather puzzled The blood-vessels, of course, are exceedingly numerous and thick and in very many places where the section is very thin the vessel is surrounded on the outside of its wall—and I do not think it is connected with the wall of the vessel at all, unless it be a proliferation of cells outside—but there are regular rings, sometimes four or five rings of cells lengthened out very much as the cells would be in a blood-vessel, the nucleus is sharply stained, and shows very distinctly. The tissue almost everywhere in places shows little masses of cells sharply stained. A few of them can be seen in the normal choroid plexus but they are very much more numerous in this specimen and sometimes whole masses of them, and in some places there is apparently a tissue material outside of the vessels themselves, which is made up almost entirely of these small cells all massed together. Of course, everywhere in the tissue you can observe the peculiar epithelial cells which belong to the choroid plexus. So far as I have been able to study the specimen it appears to me that those

small cells, massed together as they are, rather indicate that the lesion is a syphilitic one. On that point I am not sure myself, but it does not appear to me that it is any other kind of tumor. I must say I thought the man had syphilis when I saw him, and I recollect very distinctly the idea that I had at the time, and I got that idea becaused he had in the palms of both hands a rather suspicious looking eruption which looked something like eczema, but it was not true eczema, and that led me to suspect he had syphilis, although the physician in New York who saw him thought he did not present any evidence of syphilis whatever.

I should be very glad if the members would look at the specimen, especially those familiar with microscopic work, because I would like to know if they can form any idea from what they see under the microscope as to whether that is a syphilitic tumor or not. I know that it is asking too much of a member to look at a specimen here and make much of a criticism of it, because it is very difficult to do so. If it is syphilis, antisyphilitic treatment did not do the man any good, because he was treated with that pretty thoroughly. The specimen here under the microscope shows fairly well the mass of small cells, and there are other slides here which the members can examine.

DISCUSSION.

Dr. Cardwell: Were there no areas of anesthesia?

Dr. Shaw: No, there were not.

Dr. Cardwell: Is that usually the case with tumors of the brain in this region; if they press on the mid-brain, the sensory and motor fibers there run more or less together?

Dr. Shaw: There were no sensory symptoms in the early history of the cases. Whether there was any anesthesia at all toward the last when the patients were stuporous, was impossible to make out.

As Dr. Cardwell has asked me that question, if you will allow me I will speculate for one second more on the subject. The tremor in that particular boy which I spoke of and which disappeared toward the last when he became more paralyzed, was an interesting point because it shows this: that whenever you press moderately on motor fibers in the brain you are very apt to have a tremor, and when you press on them sufficiently to injure them, then you get paralysis. Theoretically, it would appear to be as if the impulses along the motor fibers were simply broken and that gave rise to the tremor, but when the pressure is greater the

JOSEPH CHRISMAN HUTCHINSON, M.D., LL.D., 1866.

EDWARD R. SQUIBB, M.D., 1876. ALEXANDER HUTCHINS, M.A., M.D., 1883.

LEWIS STEPHEN PILCHER, M.A., M.D., 1892.

Presidents of the Medical Society State of New York from Kings County.

fibers are completely paralyzed and the tremor disappears entirely. That was undoubtedly the explanation of the absence of tremor when the boy became stuporous. I have no hesitancy in offering that as an explanation, because Dr. Seguin and myself were able to explain how certain tremors occur in that way, from the study of a case.

The other point about which I want to speculate was this: whether that dilatation of the posterior horn of the ventricle could possibly have been the cause of the deafness. You know that the cortical center for hearing is in the temporo-sphenoidal lobe, and whether that could have been the cause of deafness on that side it is difficult to say. I did not examine the ear in any way, but from the fact that the hearing had been disturbed only recently, it looked to me as though that might possibly have been so.

H. P. de Forest,
Secretary.

HISTORICAL DEPARTMENT.

PRESIDENTS OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK FROM KINGS COUNTY.

Every human being has a desire to honor those who have been selected to fill positions of honor and trust; it is, therefore, with no little pride on our part as medical men, when we point to those of our colleagues who have been elevated to the highest position within the gift of their fellow practitioners in this State.

Joseph Chrisman Hutchison, M.D., LL.D., who held the office of President in 1866, and during his thirty-four years of practice in this city, made a record for himself and the profession of medicine, of which he was an honored member, which any of us may accept as a guide for our life work. The records show that he was connected either as attending or consulting surgeon with every hospital in the city of Brooklyn, and this work on behalf of suffering humanity was continued until sickness admonished him that the time had come for him to retire from active service, and look back over the field of labor, and in doing this, it must have been a satisfaction to him to be able to say, Well done!

Edward R. Squibb, M.D., who presided as President of the State Society in 1876, and who was a member of the County

Society from 1859 to 1884, better known to the profession "as a manufacturer of drugs," and a writer upon materia-medica and pharmacy. The Doctor's style of writing convinces one of the honesty of his purpose, whether we accept his conclusions or not. Very few of us arise, after having read any of his articles relating to medicine, without having been benefited by so doing. His first paper, so far as known to the writer, was presented to the Medical Society, County of Kings, August 16, 1859—Notes upon New Remedies.

Alexander Hutchins, A.M., M.D., was honored with the position of President of the State Society in 1883. He was also President of the Medical Society of the County of Kings in 1876–'77 and 1878. His interest and devotion to the medical profession in this city need no better proof than to refer to the publication of what was known as the *Proceedings of the Medical Society of the County of Kings*, of which he was editor from 1876 to 1883. After his graduation in 1860, he accepted the position of surgeon on the steamer "Star of the West" in 1861, entered the U. S. Navy as assistant-surgeon, remaining until 1863. After the close of the war he began the practice of medicine in this city. Respected by all who know him, may he so continue until life's journey is ended.

Lewis Stephen Pilcher, A.M., M.D., in assuming the duties of President of the State Society in 1892, carried with him a feeling of respect from every member of the profession in this State. His connection with the medical press as editor and author, and his popularity as a lecturer upon anatomy, were well known. The writer is one of many who were benefited by his instructions in this particular. After his graduation in 1866, he entered the U. S. Navy as assistant-surgeon, retaining this position until 1872, at which time he began the practice of medicine in the city of Brooklyn. As an indication of the good feeling exhibited toward our esteemed colleague, he has been called upon to fill the following positions: President of the Brooklyn Anatomical and Surgical Society, 1879–80, President, Brooklyn Surgical Society, 1889–90, Vice-President, American Surgical Association, 1894-95.

He has ably filled the position of editor of the *Annals of the Anatomical and Surgical Society*, from 1878–80, *Annals of Anatomy and Surgery*, 1881–83, *Annals of Surgery*, from 1885, Lecturer on Anatomy, L. I. C. H., 1875–83.

Thus briefly have I presented a few outlines of those who have been honored by the New York State Society, and in turn

GEO. MARVIN, A.M., M.D.

have added luster to the profession in Kings county, for we feel that whatever may come to any individual member of our profession, by way of advancement, must in turn raise to a higher plane the entire membership.

Frank Hastings Hamilton, A.M., M.D., LL.D., a member of the Medical Society of the County of Kings in 1861–62, during his residence in Brooklyn, was President of the State Society in 1855.

WILLIAM SCHROEDER, M.D.,
Sec. of Hist. Com.

GEORGE MARVIN, A.M., M.D.

It is always pleasant to record the life work of one who was ever ready to minister to the wants of his fellow man; in fact the records of the past open up to our understanding the true devotion and earnestness of the physicians of this city in its early history.

If the pleasant thoughts expressed by those who were acquainted with the late Dr. Marvin illustrate the character of the man, then he must have been respected and honored by all who knew him.

Dr. George Marvin was born at Norwalk, Fairfield County, Connecticut, February 23, 1798, and died at Brooklyn, N. Y., December 23, 1874. His father, Barnabas Marvin and Hannah Richards his mother, were both natives of Norwalk, Conn.

Having been prepared for college in his native town, he entered Yale University in 1814, receiving the degree of A.M. in 1817; during the remainder of the year he conducted the Brookville Academy at Maryland. Returning to Norwalk, he began the study of medicine in 1818, matriculating with the University of Pennsylvania, where he continued his studies until 1821, when the degree of M.D. was conferred upon him, presenting an essay at graduation on "Periodic Headache." His private practice began in Rochester, N. Y., in 1821, in connection with Dr. Backus, a son of the President of Hamilton College, remaining until 1828, when he came to New York City, and in 1831, to the city of Brooklyn, remaining in the active practice of his profession until his death in 1874, covering a period of fifty-three years. In 1824 he married Miss Agnes Platt of Westport, Conn. The union proved to be a happy one, Mrs. Marvin's death taking place in May, 1870. During the forty-six years of wedded life, twelve

children were born, eight of whom died young. Mary Josephine and George B. Marvin are still living. In 1834 he became a member of the Medical Society of the County of Kings, holding the position of Censor in 1837–38–39, Vice President in 1840–41, and President in 1852. He was assistant-physician to the City Hospital from 1840 to 1845, and a member of the Council of the Long Island College Hospital from 1867 to 1874; for thirty-five years he was a member of the First Presbyterian Church of this city.

In presenting these few thoughts relating to one who, for many years adorned the profession of medicine in this city, may we feel that his labors here were not in vain, that his upright and honorable character, his devotion to his calling, his sound judgment and modest estimate of himself, all went to make the man and physician that he was.

William Schroeder, M.D.,
Sect. of the Hist. Com.

MISCELLANEOUS.

FIRST MEETING OF THE MEDICAL SOCIETY OF LONDON.

There has just been issued a handsome engraving of an old painting of the first meeting of the Medical Society of London which was held in 1773, and it contains portraits from life of the most prominent of the original members.

Among those represented are: Edward Jenner, William Saunders, whose work on "Diseases of the Liver" was the authority for many years; John Aikin, a noted miscellaneous writer and the publisher of a "General Biography;" William Babington, author of a "New System of Mineralogy" and one of the founders of the Geological Society; Thornton, author of a "Philosophy of Medicine;" Edward Bancroft, a naturalist; Robert Hooper, who published a "Medical Dictionary," and a number of other famous men of their day.

As this was probably the first medical society on record and was the predecessor of the British Medical Society, the engraving represents an event of much interest to every member of the medical profession and should prove an attractive addition to the walls of the office or home.

A copy will be mailed to any physician applying for it, by the proprietors of the Tongaline preparations, the Mellier Drug Company, No. 2112 Locust street, St. Louis.

THE POSSIBILITIES OF ANTITOXIN IN DIPHTHERIA.

In a recent article published in the *Louisville Medical Monthly*, George Suttie, M.D., Ph.G., gives a résumé of his experience with antitoxin in the treatment of diphtheria at Harper Hospital, Detroit, Michigan. The use of antitoxin was begun in 1894, the Aronson and Behring serum being employed. Forty-four cases were treated with 4 deaths, or a death-rate of 9.1 per cent. Subsequently and from that time to the present the serum of Parke, Davis & Co. has been used. In 1895 there were 25 cases treated with but 1 death, a death-rate of 4.1 per cent. In 1896, 112 patients were treated with a death-rate of 1.8 per cent. In 1897, 90 cases treated, death-rate 5.6 per cent.

In May, 1896, the Detroit Board of Health began to supply antitoxin to the poor of the city gratuitously. From that time to February 28, 1897, the following is the record of the Board:

	Cases.	Deaths.	Mortality-rate.
With antitoxin	374	47	12.56 per cent.
Without antitoxin	467	163	34.90 per cent.

From March 1, 1897, up to December, the following cases came either under the notice or care of the Board:

	Cases.	Deaths.	Mortality-rate.
With antitoxin	305	32	10.49 per cent.
Without antitoxin	632	192	30.39 per cent.

THE ASSOCIATED PHYSICIANS OF LONG ISLAND.—APPOINTMENT OF COMMITTEES FOR THE CURRENT YEAR.

The following gentlemen have kindly consented to serve:

EXECUTIVE AND SCIENTIFIC COMMITTEE.

Dr. H. A. Fairbairn of Brooklyn, chairman; Dr. J. D. Trask of Astoria; Dr. W. H. Ross of Brentwood.

LEGAL COMMITTEE.

Dr. W. B. Gibson of Huntington, chairman; Dr. J. F. Burns of Long Island City; Dr. J. M. Winfield of Brooklyn.

MEMBERSHIP COMMITTEE.

Dr. C. F. Barber of Brooklyn, chairman; Dr. D. A. Harrison of Whitestone; Dr. J. R. Taylor of Sag Harbor.

PUBLICATION COMMITTEE.

Dr. George Hendrickson of Jamaica, chairman; Dr. G. R. Butler of Brooklyn; Dr. G. W. Fuller of Oyster Bay.

The Entertainment Committee for the October meeting will be appointed later.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

URIC ACID AS A FACTOR IN THE CAUSATION OF DISEASE. A Contribution to the Pathology of High Blood-Pressure, Headache, Epilepsy, Mental Depression, Paroxysmal Hemoglobinuria and Anemia, Bright's Disease, Diabetes, Gout, Rheumatism, and Other Disorders. By Alexander Haig, M.A., M.D., Oxon., F.R.C.P. Fourth edition, with sixty-five illustrations. Cloth; gilt-edged. Price, $3.00. P. Blakiston, Son & Co.: Philadelphia.

The extreme views the writer continues to hold and promulgate with regard to the subject in hand are well explained by the success he records in treating his own disorders. We regret that he has failed to give his family history, an item of importance even in these days of advanced knowledge. Salisbury of New York ought to read his announcement that "on the non-meat diet a change was at once apparent." We then might be edified by another extreme view of the case. One paragraph (the paragraphs are numerous on every page) contains the essence of the author's conclusions, *viz.*: "If my premises are good, and my deductions sound, and if uric acid influences the circulation to the extent which I have thus been led to believe that it does, it follows that uric acid really dominates the function, nutrition, and structure of the human body to an extent which has never yet been dreamed of in our philosophy, and in place of affecting the structure of a few comparatively insignificant fibrous tissues in which it is found after death, it may really direct the development, life history, and final decay and dissolution of every tissue, from the most important nerve-centers and the most active glands to the matrix of the nails and the structure of the skin and hair."

After reading that, one is prepared for some startling revelations. He will not be astonished to read that floating masses of colloid uric acid hinder the capillary circulation and cause high blood-pressure! On that colloid uric-acid plug you can build most anything in the line of disease. It is unnecessary to go over the list treated of in this book.

We are somewhat surprised, after reading many pages of argument and tables compiled to substantiate the author's dictum, that uric acid taken in the food constitutes the bulk of uric acid eliminated, to find this statement: "*It it also quite possible to suffer from excess of it in the blood if the formation in the body is excessive.*" We are suspicious that the author is not entirely sure

of his position, and proceed to read his therapeutic measures with some curiosity. We find that he returns to his first position notwithstanding this apparent lapse, *viz.:* that the avoidance of animal food containing xanthin compounds or uric acid, and also tea, coffee, and cocoa, whose alkaloids are similar xanthin compounds, will gradually eliminate excess of uric acid in the system. The accomplishment of this result may be determined by administering a dose of sodium salicylate, according to the author. He maintains a great increase of uric acid as compared with urea will follow if an excess of uric acid still remain in the system.

We find this remark, also: "I think that once for all we may free our minds from this bugbear of formation, oxidation, and other more or less theoretical myths, and believe that for all practical purposes uric acid is always and on all diets found in the relation to urea of about 1–35, while certain foods also introduce a more or less important quantity of uric acid or xanthin ready formed." "For my part, I return without hesitation to the doctrine of early times and fight uric acid and disease by reducing the introduction of uric acid, and, where necessary, its *formation* also. . . . We now know that constant bodily labor facilitates excretion, while vegetable diet diminishes introduction as well as facilitating excretion."

The author's return to the doctrine of early times would imply that at some time he had departed from it. A book which has as its aim the demonstration that uric acid is *the* factor in the causation of disease will not be regarded as very modern. The title *a* factor we are disposed to accept. We object decidedly to the contention that it is *the* factor. The influence of the nervous system is dismissed with the remark that it is the "Jupiter of Medicine." Modern investigation would lead one to assume that its position was more than mythical. A study of the doctor's case might give the impression that it was more than a phantom.

There is much valuable knowledge in this gilt-edged book. We advise our readers to examine it. We do not think that they will adopt the statement of the author as to having complete control over the excretion of uric acid in the urine. We can well afford to leave that to our English friends, who lead more quiet and regular lives, and possibly possess a better type of renal epithelium. And we are inclined to think that, although "Jupiter" may be less obtrusive if the supply of uric-acid irritant is diminished, he will still continue to fret his patient and baffle our efforts in this particular struggle if his wants are not supplied. A dietetic sop will fall far short of bringing about that end. To sum up, the author asserts that uric acid controls the metabolism and combustion of the body and in this way practically determines the incidence and course of microbic disease. He asserts that he has complete control over the supply and excretion of uric acid. Such propositions lead to but one logical conclusion—"one that has never been dreamed of," to use the author's words. Enviable man!

A Compendium of Insanity. By John B. Chapin, M.D., LL.D., Physician-in-Chief, Penn. Hospital for the Insane, etc. Philadelphia: W. B. Saunders. Pp. 234, 6 plates. Price, $1.25.

This brief treatise is well adapted to its objects, the needs of the medical student and non-professional reader. Its teachings are essentially correct and put in a way to be readily comprehended.

A few points may be worth special mention. Dementia in all its forms is distinctly included under insanity, despite the stand recently take by our State hospital officials!

His handling of the subject of melancholia is in general, excellent. But he fails to adequately distinguish between depressant and other hypnotics; a matter in which the teachings of our townsman, Dr. Shaw, are clearly in the lead.

Circular insanity is approved as a term (p. 131), but denied any independent reality.

An amusing expression occurs on p. 133—"A relapse need not be looked for until a fresh recurrence takes place."

The chapter on morbid anatomy is by Dr. Mosher of Albany, so favorably known to many of our State society members. It is simple and general in statement, only general paralysis of the insane being dealt with more specifically.

Perhaps the most questionable point in the book is the claim that insanity frequently develops on the basis of neurasthenia.

The practical side of the subject is everywhere given chief attention, and the work as a whole can be heartily recommended. WILLIAM BROWNING.

ATLAS OF INTERNAL MEDICINE AND CLINICAL DIAGNOSIS. By Dr. Chr. Jakob of Erlangen. Edited by Augustus A. Eshner, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic; Attending Physician to the Philadelphia Hospital. 68 colored plates and 64 illustrations in the text Cloth, $3.00.

The charm of this book is its clearness, conciseness, and the accuracy and beauty of its illustrations. We can recommend it to the teacher, the student, and the practitioner. It is a little book of 250 pages, with a full index appended. It deals with facts. It vividly illustrates those facts. It is a scientific work put together for ready reference. We are glad to hear that similar volumes are to be issued on other subjects. If they maintain the high character of this one we will be disposed to call them the geometrical series of medicine.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONERS' INDEX. A work of reference for medical practitioners. E. B. Treat & Co., New York. Cloth, $3.00 1898.

This is the sixteenth year of the Annual's existence. It has apparently been a success. The new feature of this volume is an atlas of "Bacteria Pathogenic in Man." It is a great undertaking to review the work in the different departments of medicine in a small volume of six hundred pages. What has been done by the thirty-five contributors has been done well. It will be useful as a book of reference.

THE SHIP'S DOCTOR; OR SURGERY AND MEDICINE ABOARD THE WHITE SQUADRON.

This is the title of a brochure issued to physicians without charge by The Arlington Chemical Co., Yonkers, N. Y. It is illustrated by Mr. W. Granville Smith, who has represented a great naval battle, the cock-pit of a ship during an action, and other episodes of a naval surgeon's life. If sufficient requests are received it is announced that a series of the plates of large size, suitable for framing, will be printed and sent to physicians.

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

ENTERED AT BROOKLYN, N. Y. POST OFFICE AS SECOND CLASS MATTER.

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VOL. XII. No. 9. WHOLE No. 129. | BROOKLYN, N. Y., SEPTEMBER, 1898. | Single copies 25 cents $2 a year, in advance

ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

STONE IN THE BLADDER IN VERY YOUNG CHILDREN.

BY A. T. BRISTOW, M.D.

During the past three years it has fallen to the writer's lot to operate three times for stone in little children, the oldest being but three and a half years of age, the other two being under the age of three. From the oldest child I removed a very large stone and calculous débris to the weight of 170 grs. and in both the other patients the stones were of respectable size. So far as I know, the diagnosis of stone had not been made in any of the cases until they came under my charge in the hospital. The first case came into my service during the spring of '95, at the Long Island College Hospital. The patient was a boy, three and a half years old. I did not see his parents but the history stated that he had suffered from painful urination since birth. I never saw the marks of extreme suffering more marked on any face than on the countenance of this little boy. His general condition was extremely bad and he was in constant pain. His penis was as large as that of a boy of ten and was in a state of constant erection. The prepuce was very long. There was a constant discharge of urine in jets; some hematuria. The introduction of a

sound at once revealed the presence of a large stone. I kept him in the ward a day or two before operating, hoping to build him up, but his sufferings were so acute that it was evident that he was retrograding from the delay and although very doubtful of the result, I did the high operation and removed this large calculus. In addition to the stone, the entire bladder wall was plastered with a tightly adherent phosphatic deposit which extended into the urethra, from which I squeezed it into the bladder with my finger in the rectum. The little patient did not rally and died the second day after the operation apparently from exhaustion. In the spring of '97 there came into my service at St. John's Hospital a child of two years and a half with a history that for the six months previous he had suffered from painful urination which was constantly getting worse. Blood often followed the close of urination and there was a long prepuce. In the ward the child cried constantly, but more especially on urination. On my earliest visit to the little patient he cried in pitiful tones, "Doctor, please make me well." The suffering was not so manifest in his case as in that of the first child, yet no one could see the little face without being struck with the fact that pain had left its impress thereon. I examined the bladder under chloroform and soon detected the presence of stone. I did the high operation on this baby and was gratified by his prompt recovery. In the fall of '97, there came into my service at the same hospital a child of two years and eleven months. In this little patient the symptoms and history were much the same as in the second case. There was the usual long prepuce, painful urination and the frequent appearance of a few drops of blood in the urine. Under chloroform the searcher revealed the presence of a small stone which I was unable to discover until an assistant put his finger into the bladder and elevated the floor, when it rolled within reach of the sound and the characteristic click was elicited. I did a suprapubic cystotomy in this case and again recovery ensued. I present the three specimens and have the pleasure of showing the two successful cases to-night. In all these three cases the diagnosis of stone had not been made by the family attendant. Indeed, the huge size of the first specimen is sufficient evidence that it had not been suspected up to the time when the patient came into my service. In the other cases the long prepuce had been charged with all the symptoms. In view of this fact, it has seemed worth while in narrating the brief histories of these cases to emphasize the fact that stone in the bladder is of

common occurrence in young children, being most frequent between the ages of one and five years. This fact has not, I am afraid, been generally recognized. Out of 132 cases of stone between the ages of one and fifteen years, reported by Jackson in the *London Lancet*, August, 1889, 70 occurred in children between the ages of one and five years, being 53 per cent. of the whole number. Cases of congenital stone have been reported. Thus Langenbeck found a stone in the bladder of a six-months fetus. Brendel quotes three cases in which the calculus was discovered within two days of birth. My first case was clearly congenital. T. G. Morton of Philadelphia removed a stone from the bladder of a child of sixteen months. Jacobi reports 6 cases in 40 autopsies. It is unnecessary to comment on these brief statistics. They teach their own lesson.

That so many cases of stone have been reported which must have been of congenital or prenatal origin, is suggestive with regard to the pathology of this condition. Many theories have been advanced with regard to the genesis of calculus. Park recently, Treves and others earlier, have stated that nitrogenous food is an agent in the production of stone. Young infants take but little of this class of diet. Besides stone is very common in India where the diet of the people is almost entirely vegetable. So too the consumption of hard water for drinking purposes has a bad reputation in this respect, yet it is well known that stone is prevalent where the water is free from lime. The prenatal cases show that heredity must be reckoned with in estimating the causes of this condition. The blood of the mother not only transmits to the fetal kidneys all the elements necessary to cause them to excrete uric acid in abundance, but the parental cells repeat in those of the infant the tendency to uric-acid formation. Thus in a case of my own, where the mother is lithemic, in spite of medication and active exercise, both her children, boys, pass habitually quantities of fine sand also in spite of diet, appropriate medication and the active exercise that otherwise healthy boys are prone to enjoy. Significant is the fact that when stone occurs in the very young, it attacks the children of the poor. When found in the adult, it is in the persons of the well to do, or occurring late in life in old prostatics. Thus, stone may occur under three distinct sets of circumstances. In childhood and youth, in the undernourished; in middle life in the overnourished; and in the old in persons who are the subjects of retention, ammoniacal decomposition, cystitis, phosphatic deposit in the

presence of pus and blood. In the latter class of cases, stone is the result of a mechanical condition which entails the sequence which I have sketched in a few words. In both the other classes, we have uric acid, and the lithemic condition produced in exactly opposite ways. In the first class of cases, the sub-product is the result of insufficient food, improper food, chronic indigestion, a weak heart, general bad hygiene. In the presence of such conditions it is not strange that imperfect tissue changes should take place with incomplete oxidation of the nitrogenous waste. This results in the formation of uric acid, which forms the nucleus of over 90 per cent. of all calculi, other varieties of stone being subsequent deposits about a uric-acid base. The constant bombardment of the sensitive bladder of a young child by the sharp crystals of uric acid is, it seems to me, quite competent to increase the quantity of mucus secreted by the mucous membrane, to thicken it with that gluey substance called colloid, and thus complete the elements necessary to the formation of stone. In the case of the overnourished adult, more food is consumed than the body needs require. Alcohol in the shape of rich wine is taken freely, the muscular system put to but feeble and necessary uses, the lungs filled languidly and imperfectly, so that the processes of combustion burn with a slow fire, and as a result we have that clinker of the human furnace, uric acid. The lithemic condition is brought about in the two classes in quite opposite ways but the results lead in the same direction as far as stone formation is concerned. In very young children, it is possible that the bacillus communis coli may at times be concerned in the production of a cystitis which subsequently becomes the basis of stone formation. We should expect that this would happen more commonly in girl babies, and of cystitis this is true, but the same shortness of urethra which renders them more liable to a cystitis from this cause, renders them less liable to stone as the short and direct channel forms an easy outlet for the small concretions around which a calculus might form in the male.

If this view of the pathology of stone be correct, it is evident that prophylaxis must depend on attention to proper nutrition and hygiene rather than the resources of the materia medica. Thus the economic question enters into the solution of this part of the problem and the mechanic who is in the receipt of good wages will be less likely to have lithemic children than the underpaid laborer. That there is truth in this statement, the statistics of the London and India hospitals show. In London the struggle

of the submerged classes for existence is far more acute than in our republic. The poor fare worse there. In London the cases of stone in children are very common as stated by Cadge and others. In India likewise the disease is of common occurrence, so that surgeons there number their cases by the hundred where in this more favored land we number ours by tens. The same conditions prevail in India as in the icier climate, a teeming population, deprivation always, famine often. Thus, with the same factors we may expect the same result, although the nature of the food in the two instances is dissimilar as well as the meteorological conditions. In our own land we are more fortunate, for in a large hospital practice to meet but three cases of the disease in babies in three years shows a small percentage, compared with Indian or European statistics. To correct the tendency to calculus formation where it exists, we must, therefore, be prepared to regulate the diet. Children are too frequently given what's going as the phrase is, and as a consequence, particularly in the homes of the poor, are subject to both acute and chronic indigestion. An important factor in preventive treatment is the free ingestion of water. The writer is convinced that both children and adults are too often water starved. How commonly we hear the expression from people "I drink very little water." It is certain that kidneys which have to deal with insufficient fluid are imperfectly flushed, and urine of high specific gravity is more apt to precipitate its saline ingredients than when properly diluted with the natural and harmless solvent, pure water. Children are given too little water, especially young infants, and when a brick-dust deposit appears on the napkins, should be encouraged to drink more freely, particularly in summer when the loss of fluid by perspiration is apt to concentrate the urine. When the uric-acid diathesis appears in the children of the well to do, the proper administration of water may be secured by prescribing any of the alkaline mineral waters. The lithia, in my opinion, has very little to do with the result. It is the water which is the curative agent, and people will take it in this manner who could not be induced to drink freely of pure water unless under some high-sounding name. The occasional use of small doses of the mineral acids in connection with bitter tonics will be of advantage as an aid to appetite and digestion. If the action of the heart is weak this should be assisted, preferably by the administration of nux vomica rather than by the use of so-called heart tonics. Digitalis does not seem to me to be of service in

such cases, although it is a diuretic, for the reason that by increasing arterial tension, it increases the load on the heart almost in proportion to the added force which it imparts to the cardiac muscle. If a direct heart tonic is to be given, citrate of caffein seems to me to possess advantages over the older drug. This matter of cardiac insufficiency is of importance, for the renal excretion like the secretions must be imperfect unless the kidneys are supplied with blood with sufficient force to prevent a stasis on the venous side.

The question of diagnosis is an important one. In an adult, symptoms of irritability about the bladder will soon lead to the introduction of a searcher, particularly if long continued and accompanied with the classical symptoms of stone. It must be remembered, however, that little infants are unable to locate their pains and aches and describe their symptoms with the accuracy of their elders. Thus it has happened, no doubt, that these cases are overlooked. There are three symptoms, which, when observed in the same case in childhood, point almost conclusively to the existence of calculus; a long prepuce, pain on urination, the passage of blood, particularly at the close of urination. The long prepuce is caused by the constant traction the child makes on the prepuce to relieve the pain which it no doubt refers to the end of the penis as in the adult. The exquisite pain, far more severe than in the adult, is the result of the driving of the calculus by the expulsive efforts of the bladder against the sensitive vesical neck. In this way also is caused the bleeding. Priapism, which is a less common symptom, depends, where it exists, on reflex irritation. In the first case referred to this evening the bladder reached almost to the umbilicus. I believe that the increased size of the viscus was caused by the fact that the child refrained from urinating as long as possible owing to the pain thus caused, and that in this way a slow dilatation of the bladder was produced. I have said that the acuteness of the urinary symptoms in the child are far greater than in the adult. A ready explanation for this fact may be found in the anatomical situation of the viscus in childhood which is almost wholly within the abdomen. Thus of necessity the stone will rest in the most dependent part of the bladder which is the neck, whereas in the adult, it usually lies behind the prostate and only occasionally rolls against the vesical neck.

What other affections may be confused with stone? From the fact that an elongated and narrow prepuce often gives rise to

quite serious bladder disturbance, the cases of stone which, as stated, usually have a long prepuce are apt to be overlooked and the symptoms ascribed to the less grave condition. This error can be avoided in two ways. First, a circumcision which does not put an end to the irritative symptoms should be followed by exploration with the searcher. Second, it is to be remembered that the pain of the graver condition is characteristic and far more serious than the irritation which can come from a tight prepuce. The bleeding where this occurs should always lead the attendant to suspect the existence of a calculus. Blood in the urine occurs from two other causes, tumor and sarcoma of the kidney. Tumor of the bladder is of the greatest rarity in young children and where it occurs, the bleeding is far more profuse than in stone. The presence of a rapidly growing tumor in the loin will serve to make a distinction between sarcoma of the kidney and the benign affection. Rectal irritation from ascarides, &c., may give rise to vesical irritability. The absence of the cardinal symptoms of hemorrhage and great pain on urination will render the distinction between the two affections plain. Given then the probability that a stone exists in the bladder of one of these little patients, how shall we proceed to investigate the bladder? An anesthetic should always be given, for two reasons. First, because it is impossible to make a thorough search otherwise, and second, because without the anesthetic there is danger that the child in its struggles may lacerate the deep urethra, especially in front of the undeveloped prostate. An ordinary sound is a bad instrument to use in a child. Beyond the triangular ligament, the curve of the urethra is very much sharper in the child than in the adult. For this reason it is advisable to use the Thompson searcher with the short curve. This can be turned from side to side in the bladder with greater ease than the instrument of wider curve. As usually made this instrument is about 15 Fr., and will slip into the urethra of a child of three without trouble. No force must be used and the instrument should be directed so that its beak hugs the anterior wall or roof of the urethra. It is of advantage, as the instrument is depressed, to make downward traction at the root of the penis from above to somewhat straighten this curve. When in the bladder, if the stone be large, it will at once be felt. If, however, it is small, it may elude the first search. In case a stone is not found at once, the finger of an assistant may be introduced into the rectum and the floor of the bladder elevated. The stone

will at once roll within the reach of the searcher. Cases are on record where the stone has been felt by the searcher previous to operation but has not been found by the operator after the cutting. Such cases are most probably similar to one on record where the stone escaped with the first gush of urine following a lateral lithotomy, and after a fruitless search in the bladder was found in the vessel which was at the foot of the table for the purposes of catching the discharges. So, too, it is possible for very small stones to escape through the urethra after having been detected by the sound prior to operation. The rule is therefore absolute that the stone must be detected at the time of operation before the first cut is made, no matter if it has been touched but the day before operation. It does not seem possible that a surgeon could be mistaken in making a diagnosis of stone where none existed, yet this has happened to the most distinguished surgeons. Cheselden, than whom a greater operator for stone never lived, cut three patients and failed to find a calculus in all. The condition which is most apt to be mistaken for calculus, in my experience, is the thickened mucosa covering the rugæ of the bladder. This thickening is only seen after long-continued cystitis. It is not, therefore, likely to be misleading in children. Where, in spite of the symptoms of stone the searcher fails to discover the sound, a suitable silver catheter may be connected with the Bigelow evacuator. After filling the bladder with water, if the bulb of the evacuator is compressed on releasing it the water from the bladder as it rushes into the catheter will carry the stone against it, when the characteristic click will be heard. Here again it is necessary to guard against a source of error. The mucous membrane of the bladder may be sucked into the eye of the catheter and produce a click which is quite misleading. To guard against this fallacy, the eye of the catheter should not be held near the bladder wall.

A stone having been discovered in the bladder of a child, what is the best operation for its removal?

The surgeons of India, who evidently deal with many more cases of this affection in a year than the surgeons of this country see in a lifetime, are most expert operators in litholapaxy and are in the habit of crushing stones even in young children rather than subject them to a cutting operation. This undoubtedly, in most cases of stone where the mechanical conditions permit, should be the operation of choice. In this country, however, few litholapaxies are done in children of the age of those shown

to-night. For one thing, it is exceedingly difficult to get a lithotrite small enough to be used in these urethræ and yet strong enough to do the work. Of course, in the large specimen shown to-night a crushing operation would have been out of the question. Then, too, the individual skill and experience of the operator would be of far more importance in the delicate tissues of children than in the coarser fibered adult. If we were to get as many cases as our Indian brethren, doubtless we could become as expert as they seem to be, judging from their reports. It seems to the writer, however, that in small children the cutting operation will be that usually selected by most surgeons. Up to within a very few years among the cutting operations that of lateral lithotomy has easily held first place because of its lower mortality. At present the high operation has many advocates for several reasons. A number of cases of sterility have been reported following lateral lithotomy on children due to injury to the seminal ducts. These cases all occurred in the practice of Halberstadt of Pittsburg, and numbered eighteen. They have been quoted by many writers as a strong argument against the operation. Hunt, in an article in "Keating's Encyclopedia" throws some doubt on them, however. No doubt the early days of the high operation were signalized by a higher mortality than at present, for they were in preantiseptic times and we should expect an infection in the subpubic space to be far more dangerous than in a perineal cut. Then it must be remembered that it was the large stones that were selected for this route and naturally the subjects of a large calculus were more likely to be exhausted by their sufferings than those patients in whom the disease had existed for a short time. I believe that most of my colleagues in the city have to-day a preference for the suprapubic route. In connection with this operation I may be pardoned for referring to an improvement of my own in the technic now generally accepted by all the surgeons of this city and by many others both at home and abroad. It consists in the use of air for the elevation of the peritoneal fold which covers the fundus of the bladder. The use of water to fill the bladder, together with the use of a water-filled bag in the rectum, was the device of Peterson and did much to popularize the operation but the method was open to several objections. The rectal bag sometimes tore the rectum when it was filled sufficiently to bring the bladder well above the symphysis, and the bladder itself was ruptured occasionally, even when relatively small quantities of water were

injected. The reasons for such accidents are evident. Water is both weighty and incompressible. Both bladder and rectum were therefore subjected to hydrostatic pressure, the most resistless of forces. Moreover, the natural effect of the water is by its weight to drag the bladder into the pelvis and thus the use of the rectal bag becomes necessary in order to get the viscus within reach. Moreover, as the posterior surface of the bladder must naturally be held against the pelvic structures by gravity, the bladder is not able to dilate symmetrically but rather in the direction of least resistance, its lateral diameter. All these conditions contribute to make rupture of both viscera not rare. It occurred to me that in air we should have a much better elevator of the bladder than the more weighty and incompressible fluid, and so it has proved. When air is used, which may be pumped into the bladder with a bicycle pump, or what I like much better, by means of the double bulbs used with the Paquelin cautery, the bladder is at once lifted by the weightless and elastic gas against the abdominal wall and a space of three inches free from peritoneum may easily be gained, whereas with water one cannot depend on more than three fourths of an inch. No rectal bag is required and the operation is much simplified. It is difficult to rupture the bladder by means of air, even when a bicycle pump is used, and almost an impossibility if the suggestion of my friend, Dr. Wood, is adopted and the double rubber bags of the cautery apparatus used, as it is evident that the second bag enclosed in the net acts as a safety appliance. Formerly I used to inflate the bladder before making the cut through the abdominal wall and it was quite easy to see the bladder tumor presenting beneath the abdominal wall. I then measured the air by using a syringe of a known capacity. I now, however, have further modified my procedure by first cutting down to the transversalis fascia, and then, with my finger in the wound, I cause an assistant to inflate the bladder. As there is nothing but thin fascia between my finger and the bladder, it is possible to appreciate the degree of distension most accurately.

A very valuable detail has been added to the operation by Dawbarn. This consists in a device for maintaining continuous drainage through the wound, so that practically no urine escapes from the bladder and the danger of urinary infiltration is removed. The device is simplicity itself. A large loop is made in the tube of a fountain syringe and secured by rubber plaster. To the straight portion of the tube below the loop is attached a glass T,

the stem of which should be not over half the caliber of the two arms. The stem of the T is connected with a rubber tube which runs to the bladder. The arms of the T are continuous with the rubber tube which runs from the bag of the fountain syringe to a bucket on the floor. A stop-cock is arranged on the tube from the bag above the loop, so that the flow from the syringe can be regulated with some exactness. If now the water is permitted to flow slowly, it will gradually fill the loop which overflowing rapidly siphons until empty. The siphon action then stops until the loop is filled again when the siphoning is repeated. This siphon action, of course, creates a suction in the stem of the T which leads to the bladder. In this way the bladder may be kept absolutely empty, so that not one drop of urine escapes into the wound. The glass T permits the flow of urine as well as of the siphoning water to be kept under observation so that the rate of flow may be diminished or increased as the case requires. Properly adjusted and watched, this simple apparatus will keep the bladder so drained that the dressings are not even stained with urine. The rubber tubing should not be too thin, otherwise the vacuum created by the action of the water will collapse it. If the catheter is allowed to rest on the floor of the bladder, the mucous membrane will be every now and then sucked into the eye and cause much pain. I am in the habit of passing a suture through the catheter wall and then through each side of the abdominal wound. This does not seem to give any pain afterward, and no matter how restless the child, the catheter must stay in place. After four or five days I remove the catheter and allow the small wound that is left to granulate. I regard this method of drainage as a great safeguard against urinary infiltration, the chief bugbear of the operation. It has always worked successfully with me whether in child or adult. With the aid of these improvements in the technic of the high operation, I believe that it must entirely supersede the perineal route, certainly in children and possibly in adults.

DISCUSSION.

Dr. Walter C. Wood: It has been my fortune to operate four times for stone in children, although none of the cases was as young as those reported by Dr. Bristow to-night.

In reference to the paper, while agreeing with its details so fully I have no wish to criticise, I am certainly not able to add anything to what the doctor has said in regard to the general

subject. However, I have three specimens which I have removed from children, and I would be glad to show them.

[Specimens Submitted.]

A year ago I read a paper here upon cases of stone removed within the preceding year, and at that time I showed one of these cases which was a stone weighing 208 grains removed from a boy of eight by suprapubic operation, following the details as laid down by Dr. Bristow with the exception that in this case it was possible to close the wound entirely as the bladder was not inflamed, and the wound healed practically by primary union.

The second case is of interest, which has been reported at the surgical society—a stone removed from the bladder of a girl six years of age. In this case I followed the suggestion of Tait, introducing a small sound through the urethra and cutting through upon the sound, through the abdominal wall. The stone was removed with some difficulty from the bladder on account of being very adherent all about and on account of the small size of the bladder. The bladder wall hugged the stone, as seen by the blood upon the stone. That healed in three weeks without suture.

The third case, which has never been reported, is a large stone about 400 grains removed from a boy of eleven years, by the suprapubic operation according to the older method and without siphon drainage. There were abscesses and prolonged and slow convalescence, which gradually was completed.

The fourth case, of which I have not the specimen here to illustrate, occurred in a child of five, and my attention was first drawn to the fact of stone being present by there being complete retention. The boy I had operated on for bow-leg. He had an irritable bladder and daily and nightly incontinence, which I had treated for a few days with belladonna. He suddenly developed symptoms of retention and the stone was felt through the perineum. At that time I did not know the mechanism for removing urethral stones by the meatus, and therefore made a simple perineal section, which healed promptly. I believe now that case could have been treated without any cutting whatsoever. I am sorry I have not that specimen; it was simply a small uric-acid stone.

Dr. J. D. Sullivan: Dr. Bristow has discussed the subject so thoroughly that I do not think of any thing more to say in relation to it. I have operated many times for stone in the bladder, but only once on a child. In that case (a boy about ten years

old) I did a suprapubic cystotomy and removed two large stones. The case did very well excepting the difficulty experienced in effecting a permanent closure of the wound. For some months after the operation, a fistula remained which healed and reopened but finally closed permanently. I commend Dr. Bristow's method of distending the bladder with air as a decided improvement in the technic of the operation.

Dr. Geo. A. Evans: I would like to ask one question. Dr. Bristow spoke about drinking plenty of water to correct the uric-acid diathesis, or the disposition to form uric acid. I would like to ask if the taking of large quantities of distilled water would not be an advantage. It strikes me I have heard of that being used for the purpose of keeping the uric acid in solution.

Dr. Bristow: In regard to the use of water in connection with the uric-acid diathesis, I do not advise it so much for prevention as for its flushing qualities. It washes the uric-acid sand out of the kidneys, and I suppose, as urine of high specific gravity is certainly more apt to deposit sand in the bladder, to that extent it prevents the *deposit* of uric acid, rather than its formation. I have always thought, and I think many agree with me, that the virtures of these mineral waters is in the water and not in the minerals, and therefore distilled water or any good potable water would be of use in this connection.

I was interested very much in Dr. Wood's cases, but I would like to ask him why in the girl he did not go into the bladder through the vagina, or, whether the stone was so large as to oblige him to make an abdominal incision. I understood he did the high operation.

Dr. Wood: The bladder was extremely small and the stone seemed to fill the entire bladder. I had never operated for stone in a girl before. It is stated, however, that a large stone removed through the vagina may injure the mouth of the ureters; it is also stated it is impossible to use a lithotrite on a child under thirteen or fourteen without producing such stretching of the urethra as to cause a great probability of permanent incontinence of urine. Those were the reasons that induced me to do the suprapubic operation on that child.

GOUT ACCORDING TO THE URIC-ACID THEORY.

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Read before the Long Island Medical Society.

The history of gout can be traced back into remote antiquity. Uratic deposits have been found in the joints of Egyptian mummies. King Asa of Jerusalem, a grandson of Solomon, who flourished about 900 B.C., was troubled in his old age with "foot-disease." Hippocrates described gout in the Fourth Century before Christ, and from the time of Hippocrates to the present it has occupied a prominent place in medical, and also in general literature. Its most characteristic manifestations have been known for three thousand years, and there can be little doubt that the disease is as old as civilization, if not older.

Notwithstanding the long period in which physicians have had opportunity to study this disease they have been very slow in finding out its true pathology. Aretæus of Cappadocia, who lived about 100 A.D., said that the gods alone understood the real nature of gout, and at the present time we cannot say very much more with positiveness. Modern science has, indeed, made many important discoveries in the field of gout pathology, especially during recent years, but we are not yet able to offer in explanation of the nature of gout anything better than theories. Some of these theories are extremely plausible, but none of them is universally accepted, and all of them are difficult of absolute proof.

Of the various theories of gout, the one which seems to explain satisfactorily the largest number of observed clinical and pathological facts is the uric-acid theory. As early as 1775, Scheele identified the deposits in gouty joints as salts of uric acid, and in 1848, Sir A. Garrod placed this theory on a scientific foundation by demonstrating the presence of an excess of uric acid in the blood of patients with gout. Among its recent advocates the most brilliant and successful is Dr. Alexander Haig of London. Dr. Haig has succeeded in proving not only to his own satisfaction, but to that of many others, that the pathology of gout is essentially the pathology of uric acid. It may be that

Haig overestimates the pathological importance of perversions of the uric-acid function, but his theory of gout and the gouty diathesis is the most thoroughly elaborated, the clearest, and the most satisfactory that we have, and I think we are justified in accepting it provisionally for a working theory until we can find something better. But, while we may be willing to allow uric acid the bad preeminence in gout pathology, we must not ignore the fact that the disease, as it appears clinically, is very apt to have other morbific elements closely mixed up with the uric-acid element. Various obscure perversions of metabolism are, in many cases, inextricably tangled up with it; and it is certain that toxemias and nervous derangements often complicate it. If we are careful to bear this fact in mind in the practical consideration of particular cases, we can study the pathology of uric acid by itself, thus gaining a clearer conception of it, without making any sacrifice of clinical truth.

Before proceeding to discuss this uric-acid theory we ought to define gout. That is a difficult thing to do, because we do not yet fully understand the disease. What we understand by gout is something so vague and comprehensive that it evades definition. We attempt vainly to satisfy the requirement by calling it a disturbance of nutrition, a diathesis. Ewart's definition, which is certainly vague enough not to be misleading, styles it a functional disorder, ultimately culminating in a structural change. The gouty diathesis might be defined as a condition of the system in which the metabolic processes are so perverted that an excess of uric acid is formed and stored up in the body.

Uric acid is not necessarily a pathological product It is regularly formed in the body, and excreted in the urine in health. This physiological uric acid appears in the urine in a quantity which bears a definite proportion (about one to thirty-five) to the amount of urea excreted. There is good reason to believe that it is formed in the kidneys themselves out of antecedents brought from the liver. While most of it is immediately excreted, a small quantity spills over, so to speak, and is carried by the renal veins into the general circulation, which brings it again to the kidneys, when it is passed out. In the food of most people some uric acid is directly introduced in the form of xanthin, hypoxanthin, caffeine, etc. This circulates in the blood and is passed out without much delay. In health no large amount of uric acid is allowed to accumulate in the body. When its prompt elimination is interfered with, and there is storage of considerable uric acid in the

system, then it becomes pathological. Its storage in the system is the foundation on which gout pathology rests.

Why uric acid should be formed in the body at all is a puzzling problem. Urea is a much more convenient form of nitrogenous waste product, and it seems a mistake on the part of Nature to allow the body to discharge any of its waste nitrogen in the form of uric acid, since that substance is so injurious to health unless kept very strictly within its narrow physiological limits. An explanation for the existence of a uric-acid function, which is certainly ingenious, has been offered by Sir William Roberts. He suggests that the presence of uric acid in human urine is a *vestigial* phenomenon, that evolution in man has been gradually replacing uric acid, which is the chief nitrogenous excrement in many of the lower animals, by urea; in other words, that evolution has been proportionally educating the urea-producing function, while allowing the uric-acid producing function to become obsolete. He explains the apparently increased activity of the uric-acid producing function in many gouty persons on the ground that the urea-producing function being overworked (usually in consequence of a too generous diet), the uric-acid producing function increases its activity to help out the complementary function.

Whatever may be the reason for it, we know that uric acid is always formed in the body, and commonly introduced with the food. Its accumulation in the body must depend either on some condition of the kidneys which prevents its proper elimination, or on some condition of the blood which causes it to be precipitated, or both. Some pathologists, among whom Dr. Luff of London deserves special mention, incline to the belief that the efficient cause of the retention and accumulation of uric acid is a diseased state of the kidneys. Dr. Luff points to seventy cases of chronic gout in all of which he found granular kidneys. Dr. Haig, on the other hand, ascribes the storage of uric acid to alterations in the condition of the blood, and considers the kidney lesions secondary. He explains the accumulation of uric acid in most gouty cases in this manner. The small percentage of the physiological uric acid which fails to pass out in the urine the first time it tries is precipitated out of the blood before it has a second chance. Every day a little uric acid is thus lodged in the tissues, and in time the sum total amounts to a considerable accumulation, unless the uric acid is dissolved out again as fast as it is precipitated, which is just what fails to happen in the gouty

diathesis. The uric acid introduced with the food is likewise precipitated out of the blood before it can escape into the urine, and increases by so much more the morbid accumulation.

The organic chemistry involved in the precipitation of uric acid out of the blood has been studied with particular thoroughness by Sir William Roberts, and Haig agrees with Roberts in most of his important conclusions. This chemistry is too complex to be described here in detail, and I will give only a general statement of the leading facts which Roberts has discovered or verified. These facts are first, that uric acid always appears when in solution in the blood, as a quadri-urate of some base; second, that it retains this combination only when the normal phosphates are present in the blood in ordinary quantity; third, that when the blood's alkalinity is diminished, that is, when the normal phosphates are changed into triple or acid phosphates, the quadri-urates are split up into biurates which are much less soluble, and in that form are precipitated. The precipitated biurates remain in the tissues until the normal phosphates are restored, and the blood has again become strongly alkaline, when they are dissolved out and eliminated, unless another diminution of the blood's alkalinity causes their reprecipitation, which is very apt to happen in the gouty diathesis.

The ability of the normal phosphates to maintain themselves and the quadri-urates varies directly with the alkalinity of the blood, and in general we can say that anything which diminishes the alkalinity of the blood will cause precipitation of circulating urates. The blood is never allowed to become actually acid, but we will call, for convenience, those agents which diminish its alkalinity and clear it of uric acid, blood acidifiers. Among these blood acidifiers we must look for the causes of gout.

One of the most important blood-acidifying agents is a diet which contains large quantities of meat. Such a diet introduces into the blood a number of substances (of the xanthin group) which are chemically related to uric acid, and which act as acids in the blood. They promptly bring about precipitation of circulating urates, and are themselves precipitated as urates. An extensively meat diet, moreover, increases the amount of urea formed, and consequently the amount of physiological uric acid, which bears a fixed proportion to the urea, and of which a certain percentage always spills over into the general circulation.

The diet may contain blood acidifiers other than the xanthin group. A blood acidifier which has long had a reputation for

producing gout is port wine. Nearly all wines and malt liquors are blood acidifiers. Most fruits are not, because the acids contained in them are more than compensated for by their phosphates.

Sedentary occupations, which tend to diminish the natural excretion of acids in the sweat, to increase the absorption of acids from the constipated alimentary canal, and in general to weaken the ability of the tissues to do their best duty, are provocative of gout, especially when taken in connection with the above dietetic causes.

Fever lowers the alkalinity of the blood by increasing oxidation. Oxidation means acidification, both etymologically and chemically. This explains why in convalescence from fevers, when the blood alkalinity rises again, there is apt to be uricacidemia.

Cold acts as a blood acidifier chiefly by diminishing the perspiration, and thus retaining in the blood acids which would otherwise be lost in the sweat, but no doubt also, to a certain extent, by increasing oxidation in the body.

Many drugs are blood acidifiers, notably the mineral acids. Some drugs, such as mercury, lead, and most of the metals, cause direct precipitation of uric acid in the tissues by forming with it insoluble urates. Painters' colic is a lead gout: urate of lead deposited in the walls of the intestines or the coeliac ganglion accumulates there in sufficient quantity to cause irritation. Morphin is a notable blood acidifier, and no doubt owes part of its effect to its sedative action on the intestines which allows the blood to absorb acids from them.

Heredity is a well-known and important etiological factor in gout, and I explain heredity in this disease as involving an abnormal susceptibility to blood-acidifying agents, and also, perhaps, a condition of the kidneys which allows an unusually large percentage of the uric acid formed in them to spill over into the general circulation. Similar ways of living partly explain the occurrence of gout in successive generations, but that is not all of the explanation. We are bound to believe that some people with apparently sound organs to begin with, are naturally less able than their fellows to properly excrete all the uric acid which gets into their blood.

Age has a marked influence on the alkalinity of the blood. During youth and early manhood, when the vital processes are most active, the blood's alkalinity is lower than in the latter half of life. This explains why gout seldom manifests itself in any

very pronounced form before the age of thirty-five or forty. Before that age in a gouty individual the accumulation of urates is going on; after that age the accumulated urates are dissolved out more and more easily by the increasingly alkaline blood.

The urates accumulated in the system may remain there a long time without doing any particular harm if, as is commonly the case, they are distributed generally throughout the body. But they are bound to come out into the blood again sooner or later, and this brings us to the kernel of uric-acid pathology, or rather, to the double kernel, for the manifestations of gout divide themselves into two classes; first, those due to reprecipitation in particular tissues of a considerable quantity of circulating urates. and second, those due to their presence in quantity in the blood.

The concentration of urates in a particular tissue is determined by the diminished alkalinity of that tissue compared with the other tissues of the body. When the blood containing dissolved urates passes through a tissue whose alkalinity has been diminished or lost, urates will be precipitated in that tissue.

The first joint of the great toe, because of its anatomical arrangement and use, its frequent exposure to chafing, to cold or to traumatism, is more liable than the other joints to lose its alkalinity, and this explains why it is so frequently attacked by gout. The manner in which an attack of classical toe-joint gout is brought about is this: The gouty patient does something which floods his blood with urates, and at the same time does something else which acidifies his toe joint. Immediately urates are deposited in the joint, and as soon as a small quantity has arrived the irritation caused by their presence increases the acidity of the joint and its attraction for urates. If the progress of the attack is not checked most of the urates in the blood may be deposited in that single joint. After one or more attacks the joint is left with its alkalinity permanently diminished, and consequently liable to attacks whenever the blood gets full of urates, without their happening any coincident injury to the joint.

When several of the larger joints, the fibrous tissues of the heart, or the muscular aponeuroses, lose their alkalinity from exposure to cold and wet, strain, or any other cause, and at the same time a fall in the alkalinity of the blood takes place, we have a clearing of urates out of the blood, and if their quantity is appreciably large they will be deposited in the above joints or tissues and produce inflammation. Such an attack we call acute rheumatism. Acute rheumatism differs from ordinary acute gout

only in the wider distribution of the peccant urates (which in a typical attack are confined to one joint), and in the contemporaneous clearing of all urates out of the blood, which need not happen in the toe-joint disease.

Chronic rheumatism and rheumatoid arthritis are characterized by a gradual accumulation of urates in joints whose alkalinity is permanently diminished. Acute exacerbations may occur whose severity is limited by the amount of urates in the circulation at the time they are cleared out, which is usually not large in these diseases.

Urates are sometimes deposited in the walls of the intestines, and if the deposition occurs in or around the appendix vermiformis the symptoms of appendicitis may be clearly given. They are often deposited in the walls of the blood-vessels, where they produce phlebitis and endarteritis, and predispose to aneurism and apoplexy. Deposited in the connective tissue of the tonsil or iris they produce tonsillitis or iritis.

Urates may be deposited in any tissue of the body in sufficient quantity to produce inflammation or mechanical injury, but the tissues of preference are the connective tissues. With this general statement we will pass on to what is, perhaps, the more important part of the pathology of gout, which has to do with the direful effects of the presence of uric acid in the blood while it is trying to escape from its prison in the tissues into the urine.

In its passage through the blood uric acid, except in very minute quantities, raises the blood pressure, which is shown by a high tension and slow pulse. Its pathology here is the pathology of high blood pressure. Just how the dissolved urates raise the blood pressure can only be conjectured, but it is probably in one of the two following ways, if not in both of them. Either by the irritation of their presence they induce contraction of the arterioles, or, when circulating in a state of semisolution (a gelatinous, colloid condition to which they are very liable) they clog the capillaries. The latter is the ingenious theory of Dr. Haig.

The tremendous pathological significance of this high blood pressure impresses us more deeply the more we study it. We see that among its mechanical effects may be hypertrophy or dilatation of the heart, or apoplexy, or congestion of the viscera and mucous membranes producing catarrhs and cirrhoses. It has long been observed that asthma, bronchitis, dyspepsia, and congestion of the liver were common among gouty persons.

We see also the profounder pathological fact that this high

blood pressure diminishes nutrition and oxidation all over the body and interferes with the removal of waste products from the tissues; in other words, it depresses metabolism. In the furnace of the body the draught is turned off, the coal supply is diminished, and the ashes left to clog the grate; or, to use the terser simile of Dr. Haig, the fires of life are dampened down by the high blood pressure of uricacidemia.

One of the earliest and most commonly observed results of this lowered metabolism is mental depression and headache. The so-called "bilious" headache (migraine), to which many persons are periodically liable, is due to uricacidemia. Uricacidemia may produce in the brain more serious disorders; the mental depression which it produces may become melancholia, or even insanity in predisposed individuals, and there is good reason to believe that it sometimes excites epilepsy.

In the muscles uricacidemia causes fatigue to come after slight exertion.

In the organs it causes impaired functional activity.

In the skin it tends to produce eczema.

Continued for a long time uricacidemia may produce diabetes or Bright's disease. We interpret glycosuria as the result of the insufficient combustion of the carbohydrates taken in with the food, and infer that the oxygen-starved tissues of the congested and enfeebled liver (which is the special furnace for the combustion of carbohydrates) cannot burn up all the glucose brought to it, and that the excess is passed out in the urine.

In albuminuria we see an indication that in the clogged and starved tissues all over the body, nitrogenous metabolism is working only half time. The albuminoids taken in with the food should be all split up into the urea, etc., or take the place of albuminous tissues of the body which are so split up. When there is uricacidemia it is difficult for the food albuminoids to get to the tissues, and if they do, to find oxygen enough there for their proper combustion. The excess which fails to be metabolized is passed out in the urine but little changed. This albumin passed in the urine represents, or ought to represent, the loss in urea excretion noticed in patients with persistent albuminuria. Albuminuria continued for a considerable time produces irritation and organic disease of the kidney. It thus appears as one of the causes of Bright's disease instead of an effect, as has generally been supposed.

Besides the foregoing there are a few other diseases which

Dr. Haig believes are caused or predisposed to by the high blood pressure of uricacidemia. Raynaud's disease is one of them; another is the common cold.

The flooding of a gouty patient's blood with uric acid is consequent on a rise in the alkalinity of his blood. Among the particular causes which increase this alkalinity may be mentioned, warmth, bodily exercise, vegetable diet, catarrhal conditions of the gastro-intestinal tract, wasting diseases, convalescence from fevers, and drugs. In every person, gouty or otherwise, there occurs during the morning hours what has been called the "alkaline tide" in the blood. The approach of age, as we have before stated, is marked by a rise in the alkalinity of the blood, and there is apt to come a time in the history of every gouty patient when meat diet, acid urines, and blood acidifying drugs are powerless to prevent the stores of urates accumulated in his system from flooding his circulation. If the gouty unfortunate during his carnivorous youth and manhood has stored up a very large quantity of urates he will, during the latter years of his life, when his blood has become strongly alkaline, dissolve out those urates, and the continued high blood pressure which they will cause before they escape through his kidneys will produce in him a pathological complexus, the most important element in which is likely to be Bright's disease, unless apoplexy or some intercurrent disease cuts short his miseries.

From the foregoing brief sketch it will be seen that the uric-acid theory of gout is a very comprehensive theory. It extends the sphere of gout so as to make it include a large segment of medical pathology and fastens together by the bond of uric acid a number of diseases which have not, hitherto, been suspected of having any connection with each other. It makes the essential facts in this extensive pathology to be the storage of urates in the system, their deposition in particular tissues, and their production of high blood pressure while in the circulation with suboxidation and depressed metabolism. It is a brilliant and plausible theory, and may well be true. But if we accept it, we must not fail, as I have insisted in a previous paragraph, to bear in mind, in the consideration of any particular case, the fact that while uric acid may be the principal, it is by no means the only morbific element in the pathology of gout. This fact is of particular importance in connection with the treatment. It explains why it is that treatment, which seems perfectly rational as directed against a purely uric-acid pathology, does not always effect a cure. We

are now able to treat gout much better and more rationally than we were before the pathology of uric acid was placed on a scientific foundation, and the action of certain drugs (notably the salicylates) on the solubility of uric acid, was discovered; but in treating those "complications of disorders" in which gout often conceals itself, we are still compelled to rely to a considerable extent on empirical methods.

HEMANALYSIS AND ITS PRACTICAL APPLICATION.

BY HENRY P. DE FOREST, M.D.

"That portion of our work as physicians which consumes the greatest amount of time is diagnosis, for after that is once made, prognosis almost speaks for itself, and treatment, although the most important part of the practice of medicine, is in most cases simple, and its direction takes but little time." The thought thus expressed by a recent writer (Meigs) has occurred to many other physicians since the "practise of physick" became a profession. Each investigator has contributed his mite to render diagnosis more certain, and whatever promises to increase our knowledge is always accorded a hearty welcome.

To the clinician the composition of the various fluids of the body has always been a subject of great interest. Urinalysis has been taught in the medical schools for many years. With Koch's discovery sputum analysis became of practical importance. The stomach secretion and other products of the intestinal tract were the next to be systematically examined. The cerebrospinal fluid, the lymph, and the blood are more difficult to secure, and with the first two the future still holds the key to their clinical significance. Not so with the contents of the blood-vessels. The blood has already been studied, and while "something still remains undone," much has already been accomplished. To this clinical examination of the blood and its practical application it is now my purpose to direct your attention.

Hemanalysis (from the Greek αἷμα blood, and αναλύω, to undo or resolve), if I may be permitted to use the word, is in many ways comparable to urinalysis, and during the procedure certain things are to be observed, tested, or estimated. These may be grouped as follows:

A. Macroscopic examination to determine:

1. General appearance.
2. Reaction.
3. Specific gravity.
4. Hemoglobin.
5. The relative volume of corpuscles and plasma.

B. Microscopic examination to determine:

1. The appearance of the corpuscles in a fresh specimen.
2. The number of erythrocytes.
3. The number of leucocytes.
4. In a stained specimen, the character of the leucocytes and the relative proportion of each variety.
5. The presence of micro-organisms.

This list is a long one, and if each item was carefully determined the time required would be considerable. As a matter of fact, the quantity of hemoglobin, the number and ratio of the corpuscles, and their variation in size and shape, are at the present time the only factors of practical value.

The mode of procedure in hemanalysis is essentially as follows: At the bedside of the patient place a small stand, and on this arrange a dozen perfectly clean cover-glasses on a sheet of filter paper; two slides on which a ring of vaseline has been made of the same size as a cover-glass; a spear-bladed needle or a hemaspast; a hemoglobinometer, a hemacytometer, and a small bottle of staining solution to use with each pipette; two rubber bands; a wide-mouthed bottle containing a mixture of alcohol and ether; a bit of absorbent cotton, and a pair of cover-glass forceps.

When these articles are all ready cleanse the ear or finger with the cotton soaked in the alcohol and ether solution, and use the needle or hemaspast. Wipe away the first drop of blood. From the next drop prepare very thin cover-glass preparations, dropping a cover after smearing, upon each vaseline ring; this forms a moist cell and will preserve the corpuscles unchanged for several hours. Place the other cover preparations film side up on the filter paper to dry.

Then determine the amount of hemoglobin by the apparatus of Gowers or the more elaborate one of Von Fleischl. Either is reliable, but for portability and for the fact that artificial light is not needed the former is to be preferred.

The pipettes used for counting the erythrocytes or red-blood corpuscles, and for counting the leucocytes are next to be filled. Those of the Thoma-Zeiss apparatus are practically the only ones that can be used for this purpose. The proper pipette is to be

filled with the given quantity of blood and its most suitable diluent, and when each pipette is filled a rubber band is placed over the ends to prevent evaporation or leakage.

By this time the cover-glass preparations are dry; place them in the alcohol-ether mixture for fixation. Get your things together and go home. The time at the bedside need not exceed fifteen minutes.

Upon reaching your microscope attend first to staining the specimens. An hour in the alcohol-ether mixture will have fixed the film, or, if the method of Ehrlich is preferred, place them on the copper table and heat them.

While fixation is in progress examine the two vaseline cells and observe the appearance of the corpuscles in the fresh specimen.

Then stain the fixed specimens, using the double stain of Plehn for one set, especially if the plasmodium malariæ is to be sought, and using the triple stain of Ehrlich in other cases.

The erythrocytes should first be counted, and then the leucocytes. As the hemacytometer of Thoma-Zeiss is one of the oldest instruments that we have in hemanalysis, and as full directions are given with each instrument details as to its use are not needed.

When these facts have been determined the relative amount of hemoglobin in each corpuscle is obtained by dividing the percentage of hemoglobin by the percentage of erythrocytes, assuming 5,000,000 to be the average number of the latter per cubic millimeter. This result is known as the *color index.*

NOTE.—For erythrocytes use small pipette and dilute 1.200 with Toisson's solution.

Methyl violet, 5 B	.025 gm.
Sodium chlorid	1.000
Sodium sulphate	8.000
Neutral glycerine	30.000 c.c.
Distilled water	160.000 c.c.

Foor leucocytes use large pipette, and dilute 1:10 with acetic-acid solution.

Glacial acetic acid	.3
Distilled water	100.0

Plehn's stain (double).

Methylene blue, concentrated aqueous solution	60. c.c.
Eosin ½ per cent. in 75-per-cent. alcohol	20. c.c.
Distilled water	40. c.c.
Sodium hydrate, 20-per-cent. solution	12. gtt.

Specimens in absolute alcohol four minutes; stain in above five to six minutes.

Lastly the stained and mounted specimens are to be examined using a good lens with a high magnification.

So much for the technic. Now as to the results. To understand these certain facts must be borne in mind and certain definitions formulated.

Blood consists of a fluid element or plasma, and solid elements or corpuscles. There are three classes of corpuscles: red or erythrocytes, white or leucocytes, and blood plaques or hematoblasts.

The first class, or *erythrocytes*, are disc-shaped; the central depression is called the delle; they have a tendency to form rouleaux; normal erythrocytes have no nucleus. It was formerly believed that the red blood-cells never had a nucleus. This is now known to be untrue. We may find nucleated erythrocytes; first, in the blood of embryos; second, in children during the first and second day; third, in the bone-forming organs, the marrow of the ribs, the sternum, the vertebræ, and the spleen. In these organs the nucleus escapes and the red cells without the nucleus pass into the circulation. These cells with a nucleus are therefore very young cells and are the preceding stages of the normal red blood-cells. Their appearance in the circulation is always pathological, and in such cases we are occasionally able to observe the escape of the nucleus from the corpuscle.

In studying the erythrocytes, therefore, whether in the unstained or in the stained specimen we must observe:

1. The *number* of the corpuscles. In normal blood these are in rows, and are too numerous to be counted. If they are decreased they have lost their ability to form rouleaux and are in smaller numbers in the field of vision. If they are greatly decreased they are so scattered over the field that they can be easily counted.

2. *Hemoglobin.*—As has been mentioned the normal cell has a

Ehrlich's stain (triple).

Orange G solution, saturated aqueous .	40. c.c.
Acid fuchsin solution, " " .	45. c.c.
Methyl green solution, " " .	55. c.c.
Distilled water	50. c.c.
Absolute alcohol	50. c.c.
Glycerine	15. c.c.

In preparing the saturated solutions of the stains it is better to take several days adding a little more power each day till there is a sediment at the bottom. This stain improves with age. Use Grubler's stains only.

small depression near its center called the delle; the larger this depression relatively, the smaller the amount of hemoglobin. If, therefore, the majority of the red blood-corpuscles have a large depression, the amount of hemoglobin is shown to have been decreased.

3. The *size* of the red blood-corpuscles. In normal blood the erythrocytes are all about the same size, and even a slight difference in size does not signify a pathological condition. If the differences in size are pronounced the large ones are called megalocytes and the smaller ones microcytes.

4. *Shape.*—Slight irregularities are not pathological. If the cells are much distorted they are called poikilocytes, and the condition is known as poikilocytosis.

5. Observe whether nucleated cells are present or not. The site, place of origin and the function of these have been mentioned. When they appear in the circulation two forms are distinguished: (*a*) *Normoblasts,* very young red cells of the same size and shape as the others; the nucleus soon escapes and the normal cell remains. Their appearance in the circulation indicates an increased activity of the blood-forming organs. They are found in chlorosis, and in the secondary anemias, particularly in cancer. (*b*) *Gigantoblasts.* These are nucleated red cells two or three times as large as the ordinary ones. The nucleus does not escape, but breaks up and is absorbed or dissolved in the hemoglobin. By this dissolution the composition of the hemoglobin is changed. When the acid nucleus is dissolved in the basic hemoglobin the reaction becomes neutral. The hemoglobln has lost its quality of being stained by one stain (eosin), and is now stained by two stains, eosin and methylene blue, or hematoxylon; the resulting color is not red but violet.

The *second class* of corpuscles comprises the white blood-cells or *leucocytes.*

Classification: These are classified as follows:

1. According to the nucleus.
   (*a*) Mononuclear.
   (*b*) Polynuclear.
2. According to the place of origin.
   (*a*) Lymphocytes, originating in the lymphatic glands.
   (*b*) Splenocytes, originating in the spleen.
   (*c*) Myelocytes, originating in the marrow of certain bones.
3. According to protoplasm.
   (*a*) Homogeneous.

(*b*) Granular, large or small.

4. According to the microscopic reaction of the protoplasm to certain stains.

(*a*) Eosinophiles, also called acinophiles, granulations stained only by acid stains (*e. g.*, eosin).

(*b*) Basiophiles, basic in reaction and stained by the basic stain methylene blue.

(*c*) Neutrophiles which have granulations stained by acid and basic stains. The granulations are small and lie over and around the nucleus, and not simply at the side of it, as is the case with the eosinophiles.

In the double stain of Plehn, eosin, an acid stain, stains red corpuscles red, and also the large granulations of the eosinophiles. Methylene blue is a basic stain and stains the nuclei violet or blue. The fine granulations are not stained by this method.

In the triple stain of Ehrlich, orange-G, an acid stain, gives to the hemoglobin of the erythrocytes a yellow color; acid-fuchsin, also an acid stain, stains large granulations red; methyl green, a basic stain, stains the nuclei blue. The small granulations of the neutrophiles are acted on by the two last-mentioned stains and the combination color of violet results.

The Nucleus.—The nucleus consists of two substances, the one chromatic which can be stained; the other achromatic which cannot be stained. The younger the nucleus the more achromatic it is, and consequently the lighter it is color; in old nuclei this condition is reversed; between the two are many transitional variations.

As the cells increase in age the nucleus, which is single, in the blood-forming organs and, in the majority of cells of blood which leaves these organs, gradually changes its shape, becoming kidney-shaped, horse-shoe-shaped, embryo-shaped, and finally two or more nuclei are formed, a polynuclear cell. These polynuclear cells are, therefore, formed in the course of development from the mononuclear cells and are more common in the blood-vessels leading to the blood-forming organs.

Three varieties of mononuclear leucocytes exist in the blood:

1. Lymphocytes, slightly smaller than the red blood-cells, with a dark-colored nucleus, and around its margin a relatively small amount of homogeneous protoplasm.

2. Large mononuclear, much larger than the erythrocytes, the nucleus is light in color, and they have more protoplasm than the lymphocytes, although it is also homogeneous.

3. Transformation cells with the nucleus of various shapes and in the advanced stages showing small granulations of the protoplasm.

To summarize the stages of growth of the leucocytes we may classify them as follows:

(*a*) Small lymphocytes.

(*b*) Large lymphocytes and transitional forms—young cells.

(*c*) Polymorphonuclear neutrophiles—adult cells.

(*d*) Eosinophiles—old cells.

(*e*) Basiophilic mast-cells. These have lately been described as a normal constituent of blood, their significance is as yet undetermined. Stain with dahlia as the triple stain does not show their granulations.

Stain covers twenty-four hours; wash and mount.

The *third class* of blood-corpuscles comprise the *blood plaques* or *hematoblasts*. These are very small bodies, rarely seen because of their rapid disintegration on exposure to the air. Little is known as to their properties or function.

ABNORMALITIES IN THE NUMBER OR IN THE RATIO OF THE ERYTHROCYTES AND LEUCOCYTES.

The average number of red corpuscles found in a cubic millimeter is 5,000,000. In the same quantity of blood 10,000 leucocytes are usually present. The normal ratio is therefore 1:500.

An increase of the red cells is always relative, and occurs in diseases in which there has been a marked loss of plasma as in cholera and dysentery. A decrease of the erythrocytes is called *oligocythemia*, and is a frequent symptom of primary and secondary anemia.

An increase of the leucocytes is called *leucocytosis* and occurs in many acute and chronic diseases. A decrease of leucocytes is called *leucopemia*, and is rarer, occurring in typhoid fever, measles, and in primary pernicious anemia.

A diagnosis of leucocytosis is possible by either counting the number of leucocytes with the hemacytometer or by estimating the number in the stained specimen. With an immersion lens and an ocular No. 4 there are about twenty leucocytes in a hundred fields, *i. e.*, one in every five fields. A mild leucocytosis exists if

Stain for mast-cells.

Dahlia, saturated alcoholic solution, filtered .	50.00 cc.
Glacial acetic acid	10.00 cc.
Distilled water	100.00 cc.

a leucocyte is found in every field; with two to four in every field medium leucocytosis exists, and with more than five the condition is a high degree of leucocytosis.

Three forms of leucocytosis are observed: *polynuclear, mononuclear*, and *eosinophilic.*

Polynuclear leucocytosis is the form most frequently observed in physiologic and pathologic conditions.

1. *Physiologic.* (*a*) Digestive; after meals there is usually a slight increase; this is usually absent in cancer of the stomach caused by the pressure of the filled stomach on the abdomen, and by the action of the peptones. (*b*) In new-born children. (*c*) In pregnancy. (*d*) Before death. (*e*) After the ingestion of certain drugs, pilocarpin, strychnin, nux vomica, antipyrin, etc.

2. *Pathologic.* (*a*) In the acute infectious diseases with fever, as pneumonia, erysipelas, diphtheria, and acute suppuration, the red blood-corpuscles are quite normal. (*b*) Chronic cachectic leucocytosis occurring in secondary anemia and carcinoma. The red blood-corpuscles are always changed in a greater or lesser degree. There may be a decrease of hemoglobin and no irregularity in size and shape. Or they may be distorted. Or there may be nucleated red blood-corpuscles. The severest form of cachectic leucocytosis is found in carcinoma and is called secondary pernicious anemia.

Mononuclear leucocytosis is not so frequent as the form just described, and is always pathologic. This form is called lymphocytosis. Two types are observed.

1. Absolute lymphocytosis; here the leucocytes in general are increased, and of these the mononuclear ones predominate. This is often so pronounced that no polynuclear cells are to be found. This form occurs in only two diseases—lymphatic leucemia, and in sarcoma with metastases in the marrow of the bones. Since the latter condition is very rare this form of lymphocytosis is nearly always indicative of lymphatic leucemia,

2. Relative lymphocytosis. Here the number of leucocytes is normal or even decreased, but the proportion of varieties is changed. There are more mononuclear cells than normal. This form occurs in typhoid fever, measles, primary pernicious anemia, secondary syphilis, and in rachitis.

Eosinophilic Leucocytosis.—As has been stated these cells have large granulations, stain only with acid stains, and are present in normal blood in the proportion of one to three per cent. In all acute infectious diseases accompanied with fever they disappear

completely from the circulation, and reappear in large numbers after the fever has subsided. The two exceptions to this rule are scarlet fever and malaria. In tuberculosis the eosinophiles are decreased or even absent. Increase of the eosinophiles occurs in many diseases: After the acute infectious diseases; in skin affections; such as pemphigus and eczema; in asthma and emphysema; in myelogenic leucemia; in chlorosis, and in the uric-acid diathesis.

One hundred leucocytes should be examined in the stained specimens and the percentage of each variety present carefully noted. In normal blood this is approximately as follows: Polynuclear 64 per cent., lymphocytes 28 per cent., large mononuclear 6 per cent., transformation cells 1 per cent., eosinophiles 1 to 3 per cent. Any marked variation from these percentages is of clinical significance.

These facts thus briefly described must be borne constantly in mind if we are to intelligently apply the information gathered by the examination to the diagnosis of disease, but if this be done, enough has been said I hope, to show that in many instances hemanalysis will furnish as trustworthy indications of disease as does urinalysis in the various forms of nephritis.

To give in detail the blood conditions present in each disease would require a volume, and hematology is so new a study that many of the results thus far published will, as time goes on, be materially modified by further discoveries, so that it is for the present better to rely upon the well-determined facts.

Unfortunately for us most of the original investigations upon this subject are only published in French or in German. The exhaustive bibliography given by Cabot in his excellent work shows that Osler, Thayer, Stengel, and Rotch are the only English authors whose works are of importance. Besides these authorities and many shorter articles and reprints to which I have had access, I have been fortunate enough to secure from Dr. Willard G. Reynolds of this Society his notes on the last laboratory course given by Noidorfer of Vienna, and to Dr. Reynolds I take this opportunity to express my thanks.

We are not so fortunate in having well-equipped laboratories and competent teachers on this side of the Atlantic as they are in Europe but the example set by Thayer and by Cabot certainly leaves little to be desired. It is to be hoped that in the near future our students will be given as thorough instruction in hemanalysis as in urinalysis and bacteriology. The nomenclature and

the technic are both new, and therefore appear difficult, but with a little patience the beginner can soon surmount all obstacles and secure good results.

369 Hancock Street.

DISCUSSION.

Dr. A. T. Bristow: Mr. President, the subject of blood analysis is one which has interested me very much and I have very much regretted that I have been unable to devote the time—both on account of my eyesight and on account of press of other business—that the importance of the subject deserves. There are two points which I should like to mention as being especially useful and valuable in the study of the blood, and perhaps the most important to the practising physician. We all of us know how often the diagnosis of malaria is made. Typhoid fever is very, very frequently, in its inception, called malaria, and valuable time is lost. Deep-seated suppuration is likewise very, very frequently called malaria, and I have known a patient to be treated for eight weeks for malaria who had a double pyelonephritis, with numerous abscesses in the pelvis of each kidney. I likewise recall a case which I saw about ten days ago in which a man with an extravasation of urine from a ruptured urethra had been treated for a week for malaria, there being no apparent obstruction to the flow of urine, and when he was brought to the hospital he was in a hopeless condition. Of course, these are rather exaggerated cases, nevertheless we all of us know that it is extremely common to mistake deep-seated collections of pus with concomitant hectic for malaria. The early stages of phthisis are likewise often mistaken for malaria. A blood analysis is perfectly competent, in my judgment, to clear up this doubtful ground. The reports of the Indian Commission are not now well accredited. The Indian Commission reported, I believe, in regard to the observations of the plasmodium, that it was absent in quite a large proportion of true cases of malaria, but that is not now held to be true. The place where I know this work of blood analysis has been conducted most systematically and persistently, more so than elsewhere, is at Baltimore in the service of Dr. Osler; and there no diagnosis of malaria is ever made unless the plasmodium has been found in the blood, as he considers that the plasmodium can always be found in the blood in a true case of intermittent fever, provided, of course, the examination be made before the administration of quinin. I do not know anything of more importance than this particular subject, because many, many errors

which may be most fatal to the patient may, in this manner, be avoided.

The subject of leucocytosis is also a helpful one in the study of the inflammations. I believe that we always see an increase of leucocytosis, particularly in suppurative conditions.

Now, there are many surgical conditions which we often see in the hospitals where the source of the suppuration is not infrequently very obscure and the diagnosis not an easy one to make. I have seen mistakes made by the best men in the city, and it seems to me that the resources which have been suggested to-night by this paper are most useful and helpful to us, and I hope that the paper will be the means of attracting the attention of the profession in general to this subject. I certainly believe that it is as important to be able to make a diagnosis of the plasmodium in the blood as to make a diagnosis of the tubercle bacillus, and there are but few of us nowadays who would be willing to pass an opinion on a very early case of tuberculosis unless we saw the tubercle bacillus in the sputum, and similarly I think we ought to be prepared to make the statement as to the existence or not of the plasmodium in the blood, before we make a diagnosis of malaria in any case which is apparently obscure. So likewise a marked leucocytosis with the absence of the plasmodium would point strongly to the existence of an inflammatory condition attended by suppuration.

Dr. Claredon A. Foster: Mr. President and gentlemen, I was very much interested in this paper to-night, and particularly so in the subject of leucocytosis. In the Massachusetts General Hospital in Boston it is a routine practice among the physicians and surgeons, in every case that comes into the hospital, to have the blood examined for leucocytosis. It sets them right in a great many ways, as Dr. Bristow has suggested. And in their operations for appendicitis, I believe they have gone so far as never to do an operation for appendicitis until after the acute symptoms have subsided, unless they get leucocytosis. If they get leucocytosis they go ahead; if they do not get leucocytosis they treat the patient until the acute symptoms subside and discharge him from the hospital telling him to come back in the interval and have an operation performed, or wait until acute symptoms arise again; but they usually do the former. I remember very distinctly last winter that a very obscure case came into the hospital; there were no symptoms at all in the case beyond a mild fever and a very slight chill now and again, to lead them to think there

was anything very seriously wrong with the patient. The routine practice was gone through and they found a marked leucocytosis. They then looked about for the cause of this, and after some days discovered a large abscess in the liver. An operation was performed, the abscess evacuated, and the patient recovered.

There was one point in the technic which Dr. de Forest did not mention which is of very great importance. In taking the blood from the ear or the end of the finger there is a great art in spreading the blood on the cover-glasses, and unless you have done quite a number of them you will fail almost every time. After you have the second drop of blood from the ear or end of the finger you should apply one cover-glass over the other and slip them apart very quickly. In this way you spread the blood thinly and evenly, and you do not disturb the corpuscles.

I had the pleasure, last winter, of taking a special course under Dr. Cabot, whose book Dr. de Forest mentioned to-night.

THE DIGNITY OF THE MEDICAL PROFESSION.

RESPONSE TO A TOAST AT THE ANNUAL DINNER OF THE ALUMNI ASSOCIATION OF THE LONG ISLAND COLLEGE HOSPITAL, 1898.

BY JOHN BYRNE, M.D., LL.D.

Mr. President and Gentlemen: What shall I say apropos of your toast "To the Dignity of Our Profession"? On an occasion like this, it seems to me it would be unnecessary, if not in bad taste, to refer at all to the many deeds of unselfish heroism on the part of members of our profession throughout the civilized world, in every age, and in peace as well as in war, and with which the history of medicine abounds. Surely, my friends, no such plea is needed in support of the claim of medicine to the badge of nobility, or its enviable status in the dreibund of theology, law, and the healing art. Permit me then to occupy but a very few minutes of your time in pointing out what I believe should be the basis and motive of our action, and our constant aim and object, in a social rather than a humanitarian sense, if we hope and expect to uphold and perpetuate the true dignity of our profession. I refer to the practical observance, in spirit and in letter, of "the golden rule," and the ethical motto and watchword of "esprit de corps."

However, whether the subject be considered in its ethical, social, and scientific bearing on members of our profession in their intercourse with one another, or their relations to society at large, it seems to me its scope is too comprehensive, if not inexhaustible, to admit of its discussion at any length on the present occasion. So far, then, as the inculcation of ethical principles is concerned, as well as their personal and practical exemplification by the rank and file of our profession, I am of the opinion that medicine, on the whole, and in spite of numerous "black sheep" within its fold, has much to be proud of. I know it has occasionally been hinted by those of a less hopeful nature, or pessimistic in their criticism, that the esprit de corps which we claim to exist in our ranks, is a thing of the past, old-fashioned, and obsolete. I have even heard of our noble calling having been tauntingly referred to as "that profession of diverse views and opinions," and, therefore, without just claim to the title of science. Furthermore, physicians of character, more outspoken than hopeful, have, to my own knowledge, declared in effect, that physic, like politics, has degenerated so as to become a marketable commodity and practically unconditional, so far as the principles of ethics and meum et tuum are concerned. In a word, that, in this mercenary and go-as-you-please epoch loyalty to principle, and that genuine esprit de corps, which in days gone by characterized the profession of medicine, has become unfashionable and out of date. Now, gentlemen, while unable to endorse the philosophy of Mr. Micawber, and not being blessed with the hopeful aspirations of a Colonel Sellers, I cannot accept or subscribe to any such pessimistic conclusions. There can be no doubt but that many who take a less hopeful view than I do as to the practical application of esprit de corps at the present day, are influenced in no small degree by the extraordinary occurrences noticed from time to time in old New York and other cities throughout the country, affecting the medical and surgical staffs of hospitals and other institutions. On the one hand, we have seen lay officials abusing their authority by treating as menials unworthy of consideration or the scantest courtesy, nay even deposing, whole staffs of men to whose laborious and self-sacrificing efforts alone is due whatever of character or reputation, altruistic or professional, their institution thus dishonored may possess. On the other, we have been doomed to witness the mortifying spectacle of numerous candidates for halter-and-whip recognition

struggling with ghoulish avidity to obtain and enjoy the professional property of their ill-treated brethren.

Now, I admit that examples of this kind are truly deplorable, impossible even in a trades-union, and the strongest evidence of defective esprit de corps, yet they are comparatively rare and due to causes fully understood and appreciated by us all, but which we will not stop now to discuss. In connection with this subject, however, and as an item of interest, it may not be amiss to refer to an occurrence nearer home where a single member of a corporate body discourteously ordered the suppression of a hospital report on the most frivolous and puerile pretexts. It is needless to say that this extraordinary proceeding was promptly, forcibly, but politely resented by the party who had been requested to prepare said report, and his action in the premises received the formal endorsement of his colleagues without an exception. This is a refreshing example of loyalty to principle, and loyalty to genuine esprit de corps.

SCIENTIFIC MEDICINE.

As to that diversity of opinion on questions which so often arise in our deliberations, and on account of which those who would fain deny to medicine the title scientific have sneeringly referred, a very little reflection will, I think, explain. In the first place, medicine, unlike chemistry, physics, mechanics, biology, sociology, or any other more or less distinct branch of science, is, in its very nature, a composite and an exceedingly complicated study, and, in its demands upon all departments of science, may be truly said to be eclectic in the strictest interpretation of the term. Outside, beyond, and above the mazy realms of empiricism, all that is of value in medical progress, during the closing century particularly, is the product of all the sciences, and therefore essentially scientific. Secondly, the close and accurate observation of facts and occurrences, so often complex, discordant, and phenomenal, and their correct interpretation by the aid of fixed scientific laws, sometimes difficult to harmonize, is no easy matter. Besides, the application of all science to the interpretation of the science of health and life, mental, physical, and social, renders unity of thought or fixed rules of action well nigh impossible. Moreover analytical methods of thought and the power of assigning to coincidence, cause, and effect their proper and logical relations, are gifts not vouchsafed to all. Hence, as Herbert Spencer justly remarks "to observe correctly, though

commonly thought very easy, every man of science knows to be very difficult. Our faculties are liable to report falsely from two opposite causes, the presence of hypothesis and the absence of hypothesis. To the dangers arising from one or other of these, every observation we make is exposed, and between the two it is hard to see any facts quite truly." But, without further consideration of this phase of the subject, let me repeat, my friends, that I am not of those who would doubt the existence, or fear for the future of esprit de corps in our profession. Though sporadic examples of ethical violation and disregard of the "golden rule" must, unfortunately, be encountered, nevertheless, that noble, sacred, yet divine science, to which now, as in all ages, and in every clime, humanity has been debtor, can never be permitted to sink to the mercantile level. Who, for example, could contemplate what we see here to-night, an association composed of men not only qualified in an educational and legal sense, but thoroughly equipped through hospital experience, and united by fraternal impulses, and mutual aims and aspirations, and doubt for a moment that true professional esprit de corps has still got a firm foot-hold.

PROFESSIONAL ESPRIT DE CORPS.

The objects of this and all similar associations, I take it, are the fostering of good fellowship in its members, the free interchange of thought, and the erection and adornment of superstructures, the foundations of which were laid in college days, and during hospital service. And yet, however meritorious and exalted your motives and aims may be, and however essential to success in the line of scientific progress, it should not be forgotten that to membership in a society like yours is attached not only an honor, but certain duties of a sociological nature, by no means confined to your own association, and, which ought not, and cannot be ignored or overlooked. The ethical principle so tersely expressed in the three words esprit de corps has a broad, and, in a professional sense, a universal application. My interpretation of its scope and spirit tells me that, whether in courts of justice, or in private practice, wherever, through the whims or vagaries of patients or their would-be friends, or the mercenary intrigues of advisors, the professional character of a reputable physician is at stake, or unjustly assailed, esprit de corps demands that we constitute ourselves the defenders and custodians of our brother's honor.

A society like this, having for its main and ultimate objects, those which so forcibly appeal to all mankind, namely, the alleviation of mental as well as bodily affliction, and the preservation of health, and even life, can justly lay claim to nobler impulses, higher aspirations, and a more unalloyed humanity, than all others. Your Alumni Association is, therefore, eminently qualified to foster and encourage the broadest fraternalism in your intercourse with one another, the exercise of that honest and sympathetic feeling which cheerfully concedes to others what you rightfully demand for yourselves. In a word, that due and mutual regard for individual rights, privileges, and opinions, which should ever characterise a profession like ours. In no other manner can we act well our part, uphold the dignity of our profession, or claim the right to inscribe on our banner the ethical motto of esprit de corps, to say nothing of that broader declaration "una fides altare commune."

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

The eighth annual meeting of this association will be held at Buffalo, September 13–15. The titles of papers to be read cover the whole field of therapeutics, and the meeting promises to be most interesting and instructive. A cordial invitation is extended to the medical profession. For further particulars, application should be made to Dr. Robert Newman, 64 West Thirty-sixth street, New York.

RHUS TOXICODENDRON.

Dr. A. T. Hudson of Stockton, Cal., recommends the following treatment for Rhus poisoning in a communication to the *Medical Record.* He dissolves one ounce of muriate of ammonia in two quarts of warm water, and applies the solution on cloth or absorbent cotton covered with oiled silk or rubber tissue.

NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

The State Board of Charities has decided that the charges against this institution, that endowment funds had been misapplied, have not been sustained.

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EDITORIAL.

THE MEDICAL CLUB OF BERLIN.

While some little knowledge of this club has been brought over by traveling members of the profession, little, if anything, regarding it has appeared in the journals. Those who know the need to foreigners of just such a medical center in towns like Berlin, must be glad to drop a word in spreading a knowledge of this, "the only one of its kind in the world." To us in Brooklyn it has a further interest, as many have felt that something of the sort ought to be formed as an annex to our new building, or at least in its immediate neighborhood. In Philadelphia there is a central directory for information about clinics and lectures, but that is only a part of what it should be.

In the BROOKLYN MEDICAL JOURNAL for May, 1895, Dr. J. B. Zabriskie gave a brief account of "The Berlin Anglo-American Medical Society," of which he was president. A letter lately received from Dr. W. J. Koenig of the Dalldorf Asylum, for a time vice-president of that organization, says that it unfortunately has gone to "smash." By this, however, the field is left all the clearer for the more cosmopolite club.

The following description of this latter is given in a letter just

received from our townsman, Dr. Winfield—who, as we are all aware, sees things at the present time with an extra rosy tint:

"The Medical Club of Berlin is a very unique thing. They have a number of rooms furnished and equipped in club style. Meals are served to members, and all visiting doctors from any part of the world are invited to visit and use the club as their headquarters when in the city. Some of the waiters speak English, so an English-speaking doctor can always feel at home. In addition to the restaurant, card- and billiard-rooms, they have a spacious reading-room and library where all of the medical journals of the world are kept on file. The president is Dr. Lesser, one of the best-known professors at the University. The medical men in Berlin are very anxious to make the club a success, especially for foreign visiting physicians. It costs for visiting members 3 marks per month, less by the year."

EMIL BEHRING, PATENTEE.

The medical world has been recently shocked to learn that this distinguished scientist has obtained a United States patent on diphtheria antitoxin. The application was first made in 1895, but was five times refused. In June, however, of this year, it was granted by the Board of Appeals in Washington, on the ground that Behring's work had helped to reduce the mortality from diphtheria. The manufacturers of this serum have served notice on American manufacturers to cease the manufacture of this product. One of these, Messrs. Parke, Davis & Co., has retained eminent counsel to defend its manufacture and assures physicians and pharmacists who use or sell its product that it will protect them from all legal proceedings that may be brought against them by the holder of the Behring monopoly.

That a patent should have been sought under such circumstances is most monstrous. It has always been the glory of the medical profession that its highest aim was to relieve suffering and prolong human life, and in hundreds of instances inventions have been freely given to the world, which, had they been patented, would have made their discoverers independent, but these high-minded men have preferred to go to their graves poor and to leave their families dependent on the bounty of others rather than to yield to the commercial spirit, and regard their life-work as a trade and not a profession. We recall no man of

any prominence who has not been actuated by these high motives, and it is a cause of deep gratification that the one who now breaks through the bounds of medical ethics, hitherto so zealously guarded, is not an American. We hope for the sake of the reputation of the medical profession that the attempted monopoly will be strangled in its infancy.

SURGEON-GENERAL STERNBERG AND HIS CRITICS.

Dr. Sternberg and the department of the army which he represents have recently been very severely criticized by the press, both lay and medical, and by officers of the line high in authority, for the deficient facilities furnished to the sick and wounded in Cuba, and on the transports which conveyed them to the United States. It is always a comfort to those who are truly negligent to be able to find a scapegoat, and we are, therefore, not surprised to find that those who are really responsible for the neglect and misery of our soldiers should endeavor to place the blame on the Medical Department. This department of the army has always been slighted in the past, and we presume will continue to be looked down upon in the future. The newspaper correspondents are very likely to share the views of those with whom they are brought most in contact, and, parrot-like, to repeat opinions which they have heard expressed at headquarters. This, however, does not explain the severe criticism which some of the medical journals have made, and we cannot but believe that when all the facts are known, the editors of these will be ready and willing to do justice.

We have delayed an expression of opinion up to the present time because we felt that too few facts had come to light to justify the formation of one that would be intelligent. An official report has now been made by Surgeon Edward D. Munson, which demonstrates conclusively that the Medical Department is in no respect at fault. He says:

> Drugs, medicines, dressings, instruments, hospital tentage and supplies were loaded on the transports at Tampa in quantities sufficient to meet the needs of the Santiago expedition. These supplies were divided up on the various vessels, each organization having its own equipment. While the bulk of the supplies was with the organized hospitals, the regimental equipment was largely in excess of its needs, and was intended to be called in to supplement, if necessary, the equipment of these hospitals.

Later he continues:

The exigencies of the situation did not apparently appeal to the commanding general, and for two days the Medical Department was unable to get transportation of any kind to the other ships or to the shore, although there were a large number of naval launches and boats employed on various other duties.

I feel justified in saying that at the time of my departure large quantities of medical supplies urgently needed on shore still remained on transports, a number of which were under orders to return to the United States. Had the medical department carried along double the amount of supplies it is difficult to see how, with the totally inadequate land and water transportation provided by the Quartermaster's Department, the lamentable conditions on shore could have been in any way improved.

In conclusion, it is desired to emphasize the fact that the lamentable conditions prevailing in the army before Santiago were due to the military necessity which threw troops on shore and away from the possibility of supply without medicines, instruments, dressings, or hospital stores of any kind.

No one can read this report of one who was competent to judge, and who was on the ground, without feeling that the Surgeon-General and his department did their full duty, and should be commended for their successful effort to meet an emergency, the like of which is unparalleled in American history.

PROGRESS IN MEDICINE.

OBSTETRICS.

BY CHARLES JEWETT, M.D., SC.D.

FRITSCH'S INCISION IN CÆSARIAN SECTION.

Steinthal (*Centralbl. f. Gyn.*, April 9, 1898) reports a case of Cæsarian section illustrating a complication which may arise in delivery through the transverse uterine incision of Fritsch. The patient was thirty-four years of age, and exhausted by long labor. The cause of obstruction was a myoma. Steinthal performed Cæsarian section by the method of Fritsch. There was little hemorrhage as the uterine and ovarian arteries were controlled by manual compression. The child was partly extracted by the feet, but the head was held firmly in the uterine wound. It could be released only by making a vertical incision in addition to the transverse. An elastic ligature was then passed over the uterus down to the tumor. The placenta was extracted with but slight blood-loss. The tumor was found to be a subperitoneal growth with a broad pedicle, springing from the posterior surface

of the uterus at the level of the os internum. Several knuckles of intestines were adherent to the tumor and had to be separated. Hysterectomy was performed, and the stump stitched to the lower angle of the wound. The author remarks that the object aimed at in the transverse incision was defeated by the necessity for adding the vertical section.

[Fritsch's incision can scarcely have any advantage over the longitudinal, provided the cut is confined to the upper or fundal portion of the uterus. Transverse section does not necessarily avoid the blood-vessels. Incision strictly in the median line would probably result in no more hemorrhage. Moreover the vessels are easily controlled by manual compression or by the use of the cervical constrictor. All the advantages claimed for the transverse incision are realized in the longitudinal, by limiting the uterine wound to the thickened upper portion of the uterus.—J.]

CÆSARIAN SECTION FOLLOWED BY VAGINAL AMPUTATION OF THE ARTIFICIALLY INVERTED UTERUS.

Duchamp (*Br. Med. Jnl.*, No. 9, 1897) eleven years ago proposed the following modification of the Porro Cæsarian section: His plan was to artificially invert the uterus into the vagina after having emptied it of its contents by the abdominal incision. He has recently operated by this method. The patient was a primipara, forty-five years of age, with an irregularly formed and slightly flattened pelvis. After evacuating the uterus by the usual method of Cæsarian section he amputated it and inverted the stump as follows: A pair of long catch forceps was introduced per vaginam through the cervical-canal. With this one of the margins of the uterine incision was seized. A second forceps was introduced and caught in the other margin of the incision. The uterus was then inverted by traction on the forceps. An elastic ligature was placed about the cervix. Save for a slight attack of bronchopneumonia the patient made a good recovery. The principal advantage claimed by Duchamp for his operation is the lessened danger of hemorrhage, and the simplicity of the technic.

VAGINAL CÆSARIAN SECTION WITH COMPLETE HYSTERECTOMY FOR CARCINOMA UTERI.

Seiffart (*Centralbl f. Gyn.*, Feb. 5, 1898) reports a case of vaginal Cæsarian section performed by the method of Dührssen. The woman was thirty-seven years of age and a V para. The posterior lip of the cervix was the seat of a cancerous growth as

large as the fist. This was removed, and the wound surface disinfected. The uterine arteries were then tied, after separating the bladder. The anterior lip was incised longitudinally, and the division carried up to the body of the uterus. Bleeding was controlled by suturing the cut edges. The bag of membranes was ruptured, and, as the head had sunk into the pelvis, the child was extracted with forceps. The placenta was removed, the anterior uterine wall folded in and the fundus turned out. The entire uterine wall was then split, the broad ligaments secured with clamps and each half of the uterus removed separately. The child was saved, but the mother died on the following day.

S. thinks well of the vaginal Cæsarian section, but believes it should not be immediately followed by total extirpation if the patient is not in good condition. With a small child, and other conditions favoring he would complete the operation at a single sitting.

PROCEEDINGS OF SOCIETIES.

THE BROOKLYN PATHOLOGICAL SOCIETY.
THE 395TH REGULAR MEETING.

April 14, 1898.

The President, Dr. James P. Warbasse, in the Chair.

The program of the evening was provided by Section II., Dr. H. A. Alderton, Chairman, and Drs. Charles Jewett, Bryant, W. E. Butler, Delatour, G. R. Fowler, Heath, Matheson, Owen, Rappold, Scott, Sterling, Van Cott, W. C. Wood, Goodrich, and Hughes.

There were thirty-three members present.

Dr. Peter Scott presented the history of

A CASE OF INFANTILE SCURVY.

[History read.]

Dr. Scott: When the mother was carrying her child she received from Chicago a book called "Tokology," which some of you have probably seen, and following the directions given there she dieted herself for the express purpose of having an easy labor. The consequence was she had a very difficult labor, and the child was not healthy from the beginning. The attempt to feed it from the breast was a failure, and all the different pro-

prietary articles were resorted to. The use of Imperial Granum must have gone on for six months before the hematuria appeared, and it was used without any fresh milk, but simply the addition of water.

DISCUSSION.

Dr. W. E. Butler: Two years ago I saw a case of a child between two and three years of age suffering from what had been diagnosed as a case of hip-joint disease. A plaster cast had been put on, and he had the distinctive swelling and several of the symptoms of the disease. The diet was sterilized milk at that time, and before that he had been on malted milk. When I saw him his gums were rather spongy and hemorrhagic, and had been lanced a number of times for the teeth. I called it a case of scurvy, and he rallied under antiscorbutic treatment. I took away the sterilized milk and malted milk, and put him on Jacobi's modified milk diet, the hydrochloric acid and water, bringing it up to the boiling-point, and keeping it there for twenty minutes. The child rapidly recovered, and the hip-joint disease disappeared.

Dr. Henry P. de Forest: Within a few years we have had a discussion upon this subject in one of the societies. Dr. A. H. Bogart presented some interesting figures, and our County Society is now endeavoring to collect statistics for a New York observer.

I have seen one case myself in which the diagnosis was made of rheumatism, and another case in which the mother thought that her sister, or the nurse girl who had been looking after the child, had strained the child's back in some way. In the latter case diagnosis appeared to be hip-joint disease, as in the case reported by Dr. Butler, but the proper antiscorbutic treatment caused recovery. I saw the other child only on the night it died. About three o'clock in the morning I was called, and the child died about an hour later. The child had been sick for some six months, and had a typical history of scurvy. All of the gums were spongy, some of the teeth had fallen out, there were purpuric spots in several places on the abdomen, and yet it had been given salicylates and treated for articular rheumatism for some months. I think we ought to be on our guard in the observation of children, particularly those who are fed on the artificial foods.

Dr. F. J. Shoop: I recall a case of a child about a year old which had been fed on malted milk, and had what I thought was articular rheumatism. I changed the diet to cow's milk, and

then gave it lemon juice in the form of lemonade, instead of orange juice, and it made a prompt recovery.

Dr. Peter Scott: Mr. President, I have nothing further to add. These cases are a warning, and mothers, if they cannot use their own milk, should use cow's milk in preference to anything else. It is astonishing to find even a doctor's child brought up on canned condensed milk, and we meet these cases so often, sometimes almost hopeless. And more than that, we have an advertisement in the BROOKLYN MEDICAL JOURNAL of Borden's condensed milk, Imperial Granum, and two or three other similar foods.

I made no apology for not diagnosing the case sooner. In looking up Smith's "Diseases of Children," 1896, I find hematuria is not mentioned as a symptom of scurvy in infancy, and in Holt's book, published a year later, hematuria is mentioned simply as a symptom that may appear, and is not given at all a prominent place in the symptomatology of the disease. In this case hematuria preceded it, and was apparently the main symptom to deal with during the first four weeks of the child's sickness.

PRESENTATION OF SPECIMENS AND PATIENTS.

SARCOMA OF THE LUNGS.

Dr. Archibald Murray presented the specimen, the left lung studded with sarcomatous nodules.

This specimen is from a young man of twenty-two years, who entered Flatbush about August 1st of last year with an osteosarcoma of the right humerus. The arm was removed at the shoulder, and he went out feeling very well. About four months after that he returned with a recurrence of the growth, and the pectoralis major, and the clavicle were involved. These were both removed, and in two weeks he was out again, and I think was shown to the Surgical Society. That was about December 20th. Then he went back to the hospital, and died on March 19th. At the autopsy the space in front of the scapula and around the region of the shoulder-joint was filled in with a large, soft sarcomatous mass; both lungs were in the condition that this one here is in; there was no involvement below the diaphragm, and nothing but the lungs and this growth around the shoulder-joint.

I prepared the specimen by Kiessling's method, as first published, which uses much more formalin; the newer and later one gives better results.

STOMACH IN A CASE OF ACUTE ARSENICAL POISONING.

Dr. A. Ross Matheson presented the specimen. Stomach congested, and with numerous punctate hemorrhages. Contents show dialyzed iron and large masses of Paris green. [History read.]

DISCUSSION.

Dr. Wm. Schroeder: Mr. President, it may be of interest to report a case of a similar kind that happened in my practice. A young man about twenty-five or twenty-six, between Christmas and New Year's got hilarious with some friends, and got more whisky aboard than usual at other times of the year. While in that condition he went to a paint-store and bought 10-cents' worth of Paris green. I did not see the quantity, but that is what the boys said who were with him; and in one hand he had a glass of beer, and in the other hand the mixed-up Paris green, and he made a bet he would swallow the two, and down they went. A short time after that I was called to see him and found him hilarious, and I concluded it was a case of alcoholism, although they told me he had taken 10-cents' worth of Paris green. I sent for the stomach-pump, and in introducing the tube he began to vomit and vomited what I recognized to be Paris green. I then washed the stomach out with about six gallons of water, and followed that up with fair doses of digitalis and strychnin. I saw him the next day and he seemed to be almost completely paralyzed. The man as I say, was about twenty-five or twenty-six years old, weighed about 150 pounds, and was strong and robust in every particular, and he remained in that condition for about three or four days. With the aid of electricity and strychnin he finally got so he could move around. I saw him a few days ago; it is now four or five months since he took the Paris green, and he is just beginning to walk around with the aid of sticks.

Now, I do not know whether this condition of things follows poison by arsenic. I tried to read it up, but was unable to find the connecting link—whether it was the excessive dose of alcohol, or whether it was the arsenic poison, I do not know; but the fact remains that this young man had almost complete paralysis of the lower limbs, and likewise the arm, so that he was unable to eat or drink anything, and had to be fed like a child, and for three or four days lay almost motionless in bed. He is now able to go around with the aid of two sticks, one in each hand. That is the history from December up to the present time.

OVARIAN CYST; CHILD SIX YEARS OF AGE.

Dr. H. B. Delatour presented the specimen.

This specimen is not possessed of as much interest as the history in the case. This little girl, six years of age, returned home from school on Thursday afternoon and ran upstairs rapidly; shortly afterward she was seized with abdominal pain and vomiting. She suffered very severely during the night, and the next morning I saw her and found she was still vomiting and suffering a great deal of abdominal pain, with most of it referred to the lower abdominal region. There was no rigidity of the rectus muscle, and no increase of temperature or pulse. I suspected the child might have appendicitis, and carefully went over the case with that in view, but could make no positive diagnosis. I gave medication to control the vomiting, but no anodyne. During the next twenty-four hours the pain almost entirely ceased and the vomiting disappeared. I saw her again the following Sunday, and she was quite comfortable, although she had had a slight return of the pain and some more vomiting. On Monday she was feeling pretty well; had no pain, had had no vomiting for twenty-four hours, and was as bright as she had ever been. On Tuesday I was unable to see her, and Dr. Goodrich went to see her for me about noon; he found her suffering with a recurrence of the vomiting and the pain, and at this time there was considerable rigidity of the rectus muscle, with considerable tenderness on pressure; temperature, 100.6°. He felt then that we had a case of appendicitis unquestionably, that had abated and recurred. I saw the child in the evening myself, when her temperature had risen to 101.5°, pulse 120, and she was suffering intense pain. At the time I examined there was no rigidity of the rectus muscle, although in the afternoon Dr. Goodrich told me it was distinct. I felt that the child's condition was becoming more serious, and that we ought to make an investigation, and recommended operation accordingly. She was removed to the Norwegian Hospital, where that evening I did a right-sided laparotomy as for appendicitis and found the appendix normal, and in passing my hand down into the pelvis I found a mass which occupied nearly the whole of the pelvis. On raising it up I found I had the right tube and ovary, almost gangrenous, with a pedicle which was nearly twisted off. On untwisting I found there had taken place in the pedicle of this cyst and tube, four half turns and the strangulation was so complete that the mass had nearly sloughed off. A ligature was placed around the

pedicle, the mass removed, and the abdomen closed. The child made an uninterrupted recovery, never having any pain or vomiting, or anything in the way of symptoms afterward. The temperature the next morning dropped to normal and stayed there. This is the specimen. You can see the ovary which is not so very large, with the tube above it. The other ovary and tube were normal, the ovary itself being hardly as large as a bean.

I think the case is exceedingly interesting from the fact that in a child of that age we can have such a condition existing. I am frank to say I did not think of such a diagnosis, and I do not know that I feel particularly ashamed that I did not.

DERMOID CYST OF THE OVARY.

Dr. Delatour presented the specimen.

This case is of interest in connection with the foregoing. Yesterday I operated at St. John's Hospital on a case of abdominal tumor—a large movable tumor situated in the right side, having all the external appearances and feel of a fibroid of the uterus, but pelvic examination showed that it was not connected with the uterus. The uterine body was perfectly and easily mapped out, and it could be distinctly made out that the tumor had no direct connection with the uterus, but its feel and irregularity of outline was hardly that of an ovarian cyst, and still that was the only thing I could think of. At the operation we found an ovarian cyst, a dermoid of the ovary, and that it sprang from the left ovary. The fluid contained in the cyst was a thick yellowish or brownish fluid of which there was about three quarts. One thing which struck me particularly in this case was the length of the pedicle, and the narowness of it; that the left ovary was entirely to the left of the median line, was up in the neighborhood of the liver, and although it had been shifting all around it had not taken the same liberties of getting twisted that the smaller ones do. In thinking of the number of cases of ovarian cyst with twisted pedicle that I have seen, I think they have all been those that naturally stayed within the pelvis. I do not think any of them have been cysts with long, narrow pedicles. The cyst wall is very much smaller than it was, and growing from the inside is a cauliflower sort of mass which may be beginning malignant degeneration. There was considerable hair and a tooth in it.

DOUBLE PYOSALPINX WITH MULTIPLE PERITONEAL CYSTS, SIMULATING EXTRA-UTERINE PREGNANCY.

Dr. W. E. Butler presented the specimen.

This case is especially interesting from the fact of the peritoneal cysts, and the diagnosis that was made beforehand of extra-uterine pregnancy. The case came to me with a history of having profuse hemorrhages. I saw her first about the first week in February, and about Christmas time she complained of having severe hemorrhages, lasting for a week or two weeks, stopping for a short time and then coming on again. Two days before I saw her she told me she passed a membrane; this was her own description of the case. I did not elicit this history; she gave it to me without asking. I examined her and found in the cul-de-sac what I took to be the head and breech of a fetus, and I recommended her to go to the hospital and be operated on. I took her to the hospital and operated on her, and on opening the abdomen found a large number of peritoneal cysts so thin that they broke down with the mere touching of them. The tubes and ovaries were both down deep in the cul-de-sac, adherent everywhere to the uterus and partly to the intestine, and they were both down there and there was a sulcus between them, making it feel very much like a fetus. The principal interest in the case is the fact of the peritoneal cysts, which are rather rare. I afterward learned that she had had hemorrhages before.

The patient was a woman thirty-three years of age; United States; married twelve years, four children, and two miscarriages, the last child four years before. They had all been difficult labors, and she had a good deal of trouble with menstruation. There is nothing about the tubes and ovaries except they were very much thickened, and there was considerable pus in one of them. The patient made a good recovery.

DISCUSSION.

Dr. Butler: I would like to hear if anybody has anything to remark about these peritoneal cysts—whether they occur very often in the practice of the surgeons. I have been unable to find much on the subject in the literature.

Dr. Delatour: Mr. President, I think that in a large number of cases we do find cysts in connection with the pelvic inflammations. Sometimes there are large cysts that seem to have as their walls adhesions between different portions of the peritoneum, and in other cases we will find a small cyst, from the size of a pea up to possibly the size of a small apple, with a long pedicle either attached directly to one of the tubes, or else springing from the omentum. I have seen those in quite a large number of cases. I

WM. HENRY THAYER, M.D.,

do not know from Dr. Butler's description whether that is exactly the character of the peritoneal cyst he refers to, but cysts of that character are not so very uncommon.

Dr. Butler: Those cysts came apparently from the intestine; they were not connected with the omentum; they were not connected with the ovaries; the ovaries were well down in the cul-de-sac bound up in adhesions and did not touch them. They may have been adhesions and a collection of fluid underneath pressed them up. It was difficult to tell where they were attached, but they were not attached to the omentum; apparently to the intestines or else under the adhesions; they came up almost to the umbilicus. As soon as the abdomen was opened and they were touched they would break and lose their fluid; their walls were thinner than tissue paper.

To be continued.

HISTORICAL DEPARTMENT.

WM. HENRY THAYER, A.B., M.D.

BY ARTHUR MATHEWSON, M.D.

Our honored and well-beloved associate, Dr. Thayer, departed this life on December 22, 1897, at Lanesboro, Mass. His residence in Brooklyn was from 1866 to 1892.

He was born in Milton, Mass., on June 18, 1822. His early education was pursued at Chauncey Hall School, under his father, Mr. Gideon Thayer, the founder of that school. He became a member of the class of 1841 of Harvard University, taking his A. B. in regular course. He then studied medicine under the guidance of the eminent Dr. Henry C. Bowditch, of Boston, for three years, and received his M.D. degree from the Harvard Medical School in 1844. He was an *interne* of the Massachusetts General Hospital during his student period.

For about ten years he practised medicine at Boston and at Newton Centre, Mass. During his practice in Boston, from 1844 to 1849, he was physician to the Boston Dispensary, was connected with the Massachusetts General Hospital, as an attending physician, from 1846 to 1849, and also with the Boylston Medical School as an instructor in medicine. He was professor of Theory and Practice of Medicine in the Vermont Medical College at

Woodstock in 1854–55, and in the Berkshire Medical Institute at Pittsfield, Mass., from 1859–63. In 1861 he, with Dr. R. Cresson Stiles, edited the *Berkshire Medical Journal.*

From 1854 to 1862 he resided at Keene, N. H. He was a member of the State Medical Societies of Massachusetts, New Hampshire, and Vermont, and was a surgeon of the 14th N. H. Volunteers from 1862 to 1865, and Medical Director of New York (with the latter as an honorary member in 1870), the Second Division of the 19th Army Corps in 1865, having been mustered out in July, 1865. It was subsequent to that date, or early in 1866, that the best years of his life work, so far as it had relation to our own city, and to our own circles in medical activity began. With us he continued in great usefulness as a practitioner and exemplary citizen for nearly thirty years. With us he built up an excellent general and (toward the latter part) consultant practice among people of refinement and influence.

During the cholera epidemic of 1866 he was for a time the physician in charge of the Cholera Hospital at the corner of Hamilton avenue and Van Brunt street, which did duty in the southern district of the city from July 22 to September 6th. The Twelfth ward had more than one-third of all the cases in that year, a fact which, with others that might be mentioned, entailed extraordinary and critical responsibilities upon Dr. Thayer as head of the staff of that hospital. He discharged his duties with eminent credit to himself. His report upon that arduous service is to be found at pages 150 to 154 of the Metropolitan Board of Health report for 1866. He was connected with that Board as an assistant sanitary inspector from 1866 to 1870.

I do not find that he connected himself with any Brooklyn hospital or dispensary. He early joined the Medical Society of Kings County in 1866, filling various offices therein from 1867 to 1878, and holding its presidency in 1872–73. In 1869 or 1870, he with his long-time friend and associate in teaching, Dr. R. C. Stiles, and nine others, laid the foundation of that useful and important scientific organization, the Brooklyn Pathological Society. In this venture, feeble at the outset, he was greatly interested, was frequent in his attendance and participation in the discussions. Respecting his many contributions to medical literature and his affiliations with medical bodies, which were very numerous, I am enabled through the courtesy of Dr. William Schroeder, to supply very complete lists, which are appended to this note.

In 1892 he was obliged to give up the practice of his profes-

sion on account of deafness and removed to Lanesboro, Mass., where two of his daughters had their home. There he spent the last years of his life in the enjoyment of an outdoor life, and of the company of his children and grandchildren. His life in the Berkshire hills of Massachusetts was one of serenity and repose, but those five years were active, cheery and fruitful to their close.

The portal through which Death's processional has filed in 1897, has opened to few choicer spirits than our long-time friend and honorary associate. He came of a cultured and refined strain of New England stock, such as that about which his former teacher and friend Dr. Holmes delighted to discourse and to illustrate. Dr. Thayer's father was an instructor and Dr. Thayer was all his life long a student, a professor during several years, and with a readiness to impart of his knowledge and learning to others during all his years.

Dr. Thayer's mind was of fine fiber, his was a warm and friendly temperament, with high ideals, seeking ever the best, and with a devotion to principle and a firmness not always so clearly manifested among the refined and scholarly of our profession.

I will close this note by quoting briefly from an estimate of our deceased fellow's worth by one of his most valued friends: "Dr. Thayer was a good physician. He was thoroughly educated for the work of his profession and devoting himself to it with untiring zeal, jealous of its honor, regarding it as a sacred trust, proud of its illustrious names and great examples, grateful for the opportunities it furnished him to serve his fellow men. Yet the professional relation with him tended almost inevitably to become a personal and friendly one. There is no calling that so makes for friendship as that of the physician, but Dr. Thayer was exceptional among physicians in the degree to which he grappled his patients to his heart. It was hard to imagine how he could have been more engrossed in his profession than he was; yet he was not made selfish by his engrossment, nor careless of domestic ties, nor indifferent to literature and art, nor unmindful of his duties as a citizen. In all these particulars he was remarkable for the fulness of his life.

"I have known no other man of such a uniformly cheerful disposition. He saw the bright side of everything that had a bright side; the silver lining to every cloud. The severest trial that his optimism ever encountered was a chronic deafness, which obliged him to abandon his profession. Worse, if possible, was its cur-

tailment of his social satisfactions. For a long time he kept on hoping against hope, but when the inevitable could not be escaped, he adapted himself to it with a wonderful patience and sweetness, and well nigh convinced himself that his misfortune brought him more of gain than loss, a country life all the year round, and the daily satisfaction and delight of having his children and their children close about him. He had hosts of friends.

"To hear him speak of them was to feel the human world better and more kind. To hear them speak of him was to be astonished and delighted that any man could be loved by so many and so much. His name was like a password admitting many, who, but for that, were strangers, into immediate and vital sympathy. Their love for him united them in a delightful fellowship which had its orders and degrees, but, even for the outer planets of the system, counted much. I could not easily exaggerate my sense of the good influences that have irradiated from this happy life."

MEMBERSHIP IN MEDICAL SOCIETIES.

1844—Mass. Med. Society.

1845—Med. Improvement Society, Boston.

1845—Suffolk Dist. Society, Mass.

1846—Med. Observation Society, Boston.

1855—Vermont Med. Society.

1857—New Hampshire Society, Mass.

1859—Berkshire Dist. Society, Mass.

1860—Con. Valley Society, Mass.

1860–62—Delegate American Med. Association, N. Y. Phy's Mutual Aid Association.

1866—Medical Soc. Co. of Kings, N. Y. Censor, 1867, Orator, 1869, Librarian, 1878, President, 1872–73.

1870—Hon. Member Med. Society of N. Y.

1870—Brooklyn Pathological Soc.—one of the organizers.

1884—N. Y. State Med. Association.

1887—Hon. Member Kings Co. Med. Association.

SUBJECTS OF MEDICAL PAPERS.

1861—Edited, with Dr. R. C. Stiles, *The Berkshire Med. Journal.*

1872—Inaugural Address Pres. Med. Soc. Co. of Kings.

1874—Carbonic Acid and Its Fatal Effects.

1885—Report on Cholera, Med. Soc. Co. of Kings.

1885—Umbilical Hemorrhage.
1885—Chronic Catarrhal Gastritis.
1886—History of Malarial Fevers in Brooklyn.
1890—Fatty Heart.
1892—Errors in Ventilation.
1897—Veratrum Viride in Puerperal Convulsions.

TRIBUTE TO DR. WILLIAM HENRY THAYER.*

BY ARNOLD W. CATLIN, M.D.

To the words so tenderly recorded by others, giving the life history and beautiful character of our dear professional brother, William Henry Thayer, there is nothing to be added in the way of loyal testimony to the memory of a loyal man, but in the passing of such a one from among his fellows, there must be in the hearts of the few who stood close to him, and to whom he revealed his inner self, a sense of peculiar loss, and a most natural desire to bear their testimony, not of praise but of honest recognition.

By right of birth he was the thoughtful man. By right of training, the cultured man. By right of an inborn manliness of character, the brave, sincere Christian man, commanding the respect and winning the love of all who knew him. Many were the qualities that would naturally draw men to his side, but among them all none so winsome and abiding as his unflinching integrity and sincerity in thought, word, and action. His absolute honesty of statement at all times made every one absolutely restful in such statement. He was sincere through and through. He hated shams and quackeries of all kinds. He was eager to get the truth, and to impart it, while coupled with this was great tenderness and gentleness of expression. His presence in the sick room was a benediction, his voice a renewal of confidence, his touch, one of healing, his mission that of the comforter and counselor combined. The silent influence of such a life in a community is great indeed, for such natures realize the dignity, the duty, the privilege of service, and suffering humanity is ever in their debt. The life of such a one is his creed, and all who come in touch with such nobility are necessarily ennobled and uplifted. Purity of thought, motive, and diction were also his,

* The above was read at a meeting of the Kings County Medical Association by R. M. Wyckoff, M.D.

to look into his face was to have the full assurance of his pure life, and to hear him speak was to know at once that he was clean. Blessed are the pure in heart for they shall not only at last see God, but in their lives here, they reflect much of the divine nature, and by their presence raise the moral tone of the community in which they live. This also accounts for his universally sunny disposition. His was a happy heart, and at no time could the shadows of life make him believe that there was not brightness close at hand ready to be revealed. Even in his personal trials, and when the world of sound was closed to him forever, still it was not that he was deprived of something very precious, as much so that in this way, he was to enter into some larger experience and greater joy. His unselfish nature had a wellspring of happiness within itself, and the storms of life could not disturb this anchorage. Forced to resign his chosen calling, which was to him a divine business, peacefully he set sail into the harbor of loving hearts, and there, inexpressibly happy in the atmosphere of a devoted affection, resting for a time from the turmoil of life, at length he laid him down to rest. Tenderly and mercifully the summons came, and

"Death's quick translation
"Taught the brief summation
"Of it all."

RICHARD CRESSON STILES, A.B., M.D.

Of the many honored and distinguished members of the Medical Society, County of Kings, who have been called upon to preside over the deliberations of the Society, none was held in higher esteem than Dr. R. C. Stiles, an active worker in the field of medicine, thoroughly acquainted with the medical literature of his day, a wise councillor and upright citizen. These qualifications endeared him to all with whom he came in contact.

He was born in Philadelphia, Pa., October 4, 1830, and died at Westchester, Pa., April 17, 1873. His grandfather was John Stiles of Norristown, N. J. Both his father, Samuel Stiles, and mother, Eleanor Cresson, were born in Philadelphia, Pa.

In 1856, Dr. Stiles married Miss Maria C. Wells, daughter of Thomas Wells, M.D., of New Haven, Conn. Of the children, Eleanor Cresson Stiles died in infancy, and a son, Thomas Wells Stiles, is still living.

RICHARD CRESSON STILES, M.D.,

Medical Society County of Kings, 1868–69.

His early education was received in the schools of his native city. In 1847 he entered Yale University, from which institution he graduated A.B. in 1851. The following year he began the study of medicine in the office of Thomas Turner, M.D., of Flatbush, L. I., matriculating with the University of Pennsylvania, receiving the degree of M.D. in 1854, his essay at graduation being "Animal Heat." The years 1855–56 were spent in Europe in the hospitals of Paris. Returning to this country, he began the practice of medicine in the State of Vermont, where he continued until 1862, receiving in this year the appointment of Surgeon of Volunteers, and stationed at the hospitals at Pittsburg, Pa.; in 1863–64 he was Surgeon in Hancock's Corps; coming to the city of Brooklyn in the same year he engaged in the practice of medicine, his office being at 16 Court street, at the same time accepted an appointment as Resident Physician of the Kings County Hospital, remaining until 1868. During the years 1865–66 he held the position of superintendent of the hospital.

Under the Metropolitan Board of Health he held the position of Registrar of Kings County in 1866, and Assistant Sanitary Superintendent from 1868 to 1870.

Previous to his coming to our city he filled the following positions:

Lecturer on Physiology, College Physicians and Surgeons, N. Y., 1861–62.

Professor of Physiology and Pathology, Vermont Medical College, 1857–65.

Professor of Physiology, Berkshire Medical Institution, Massachusetts, 1858–62.

His affiliation with medical societies has been as follows: Medical Society, County of Kings, 1865–73. Vice-President, 1867. President, 1868–69. Censor, 1870. Brooklyn Pathological Society, 1870–73, of which he was one of the organizers. New York Academy of Medicine, 1865–73, and delegate to the American Medical Association in 1865.

His contributions to medical literature have been as follows:

1861—Edited, with Dr. William H. Thayer, *The Berkshire Medical Journal*, "monthly."

1865—"Medicinal and Morbific Agents, Its Influence on Muscular Tissue."

1865—"Actions of Medicines on the Blood-vessels."

1866—"Histology and Pathological Anatomy," Lecture.

1867—"Life and Doctrines of Haller," Address.

In this connection it may be interesting to note that Dr. Stiles had given some time to the study of Texas cattle disease, and discovered the parasite which caused the malady, and which Professor Haller of Jena, named the fungus Conisthecium Stilesianum, in honor of the discoverer.

This, then, presents in words the life work of one, who was called upon to lay down the burden of life at the age of 43 years. Young, and in the prime of life he had accomplished many things for the benefit of his fellow man, looking forward to a bright and prosperous future, but it was ordained otherwise, and our colleague was called to rest.

WILLIAM SCHROEDER, M.D.
Secretary of Historical Committee.

JAMES W. INGALLS, M.D.

At the recent meeting of the American Ophthalmological Society, held at New London, Conn., Dr. J. W. Ingalls was elected to membership.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

THE AMERICAN TEXT-BOOK OF GENITO-URINARY DISEASES, SYPHILIS, AND DISEASES OF THE SKIN. Edited by L. Bolton Bangs and W. A. Hardaway. Pp. 1200. Published by W. B. Saunders, Philadelphia.

In this work we have a useful addition to the literature of these subjects, and while there is no new or original material in the articles which has not already appeared in print, either in a journal or text-book, we have the most recent work presented in a concise form.

The selection of authors who treat of particular topics has been made with judgment, many of the men having done original work on the subjects of which they write; for example, J. William White writes the chapter on "Hypertrophied Prostate;" Francis Sedgwick Watson, on "Vesical Calculus;" and Eugene Fuller, on "Diseases of the Seminal Vesicles."

The dermatological subjects are handled by men of well-known reputation in their departments, such as Allen, Robinson, Klotz, Hardaway, Jackson, and Winfield.

The book is illustrated with numerous woodcuts and lithographs, and commends itself to every one who is interested in the subjects.

HENRY H. MORTON.

ATLAS AND ABSTRACT OF THE DISEASES OF THE LARYNX. By L. Grünwald, M.D., of Munich. Authorized translation from the German. Edited by Chas. P. Grayson, M.D. Published by W. B. Saunders, Philadelphia, 1898. 107 colored figures and 44 plates. Price, $2.50 net.

This book is a valuable contribution to the literature upon this special subject. It contains a deal of useful information in carefully condensed form. Every statement of fact and every description is clear, concise, and positive. This is especially true of the first portion of the book, devoted to the anatomy and physiology of the larynx, the methods of examination, and general remarks on diseases of the larynx.

The descriptions of the musculature of the larynx, utilized in the acts of phonation and deglutition, compare favorably with those found in larger and more pretentious works.

"Practical Hints for the Examination of the Larynx" presents the best guides for the beginner as to the technic of laryngoscopy that we have seen. An exception is well taken by the editor, in a note, to the use of a 10-per-cent. solution of cocain to induce anesthesia for simple examination, as being unnecessarily strong.

The detail of the positions of physician and patient during examination, of the manner of the protrusion of the patient's tongue, and of the introduction of the laryngeal mirror is a consideration of points, small, perhaps, but of prime importance to the novice. Our regret is that these "Hints" are not of greater length.

Transillumination of the larynx is not referred to. As a source of artificial light the "Welsbach" burner has rightly the author's preference.

Under "General Remarks" regarding treatment it is gratifying to see attention called, first, to the effect of abnormal systemic conditions upon the throat, and the necessity of ascertaining their possible existence before instituting local treatment.

Sixty-seven pages are devoted to "Pathology and Treatment." The classification of all abnormal conditions of the larynx under nine heads is simple and interesting. They are as follows: (1) Acute Inflammations, (2) Chronic Inflammations, (3) Neoplasms, (4) Disturbances of Mobility, (5) Disturbances of Sensibility, (6) Disturbances of the Circulation, (7) Solutions of Continuity, (8) Foreign Bodies, (9) Malformations.

The effort to give in these few pages the treatment, local and general, of all diseases of the larynx, besides their diagnoses, symptomatology, and morbid anatomy, is an evident mistake. It is attempting an impossibility. The incomplete and cursory references to surgical methods and medicinal resources are misleading to the beginner and unsatisfactory to the specialist. The space could have been better given to an elaboration of the symptoms, subjective and objective, which enable one to comprehend the full significance of the picture of disease seen in the mirror, to differentiate it, and to arrive at a definite and accurate conclusion as to the place to give it in the classification of diseases.

In giving data and pictures to attain this end, the book contributes much. The major portion of the volume is devoted to a series of beautifully tinted lithographs, over one hundred in number, true enough to be an aid to suc-

cessful diagnosis. Colored pictures of diseased conditions are generally misleading. These are helpful. For artistic merit they may be associated with the exquisite "Atlas der Kehlkopfkrankheiten," by Dr. Robert Krieg of Stüttgart. Each plate is accompanied by a short case-history, description of symptoms and signs, and reasons for making diagnosis. The last pages show enlarged microscopic views of sections of diseased tissues. These warrant a careful study, for they represent the basis for thorough and scientific comprehension of diseases of the larynx.

This book is a product of the press of W. B. Saunders of Philadelphia. The workmanship will satisfy the requirements of the most exacting.

WM. F. DUDLEY.

DISEASES OF WOMEN. A Clinical Guide to Their Diagnosis and Treatment. By George Ernest Herman, M.B., London; F.R.C.P., etc. With 252 illustrations. Published by Wm. Wood & Co., New York.

This work will prove to be of especial value to the general practitioner who limits his work in this field to minor gynecology, and to the student who aspires to major gynecological honors.

It is well indexed, the illustrations are good, and the subject matter is well arranged. The author has made a departure from the old order of classifying the diseases under discussion, producing a work which is a model in style and clearness.

The diseases are presented as they appear to the practitioner, and the full value of the symptoms in their relation to diagnosis is shown in a very concise manner, and their treatment is limited to methods that are an outcome of his personal experience.

The use, however, of the tent in dilating the cervix uteri, of the bichlorid-of-mercury solution for sterilizing surgical instruments, of some of the forms of pessaries mentioned, and the extraperitoneal treatment of the stump after hysterectomy, will not find many advocates on this side of the Atlantic; nor can we agree with the statement that "Feces are not septic; they do not poison wounds."

His classification of "Cancers" will hardly satisfy the exactions of the pathologist, although the simplicity with which he has treated the subject will appeal at once to the operator. The work, in the main, is of such excellency that these apparent discrepancies, which the author will no doubt eliminate when he undertakes a revision, will hardly detract from its value.

WALTER B. CHASE.

THE METHODIST EPISCOPAL HOSPITAL REPORTS. Volume I. 1887–1897. Edited by L. S. Pilcher, M.D., and G. R. Butler, M.D. New York: Published by the Hospital, 1898.

The reports of The Methodist Episcopal Hospital have always been models, and the volume before us is no exception. As stated in an editorial note, these reports include a series of studies based upon the material found in the hospital during the first ten years of its work. The affections treated illustrate the practical application of the teachings and resources of the medical and

surgical knowledge of the period, and present clearly the nature and scope of the work which the hospital is doing.

The Report opens with a Historical Note by J. S. Breckinridge, D.D., followed by a description of the buildings and the administration and medical organization of the Hospital, by E. A. Noble.

The surgical reports are as follows:

"Clinical Studies of the Surgical Diseases of the Female Generative Organs," by L. S. Pilcher, M.D.; "Observations upon the Injuries of the Brain and of the Spine, and Clinical Studies in Appendicitis," by G. R. Fowler, M.D.; "Cases of Fracture of the Bones," by J. P. Warbasse, M.D.; "Major Amputations," by T. B. Spence, M.D.; "Skin Grafting," by H. B. Delatour, M.D.; "Cases of Tetanus," by C. H. Goodrich, M.D.; "Anesthetization," by H. G. Webster, M.D.; "Traumatic Ruptures of the Abdominal Viscera," by W. N. Belcher, M.D.; "Surgical Operating-Room Arrangements and Methods," by L. S. Pilcher, M.D.

The medical reports are as follows:

"Typhoid Fever," by A. R. Matheson, M.D.; "Gilles de la Tourette's Disease," by A. R. Matheson, M.D.; "Pleural and Pulmonary Conditions," by G. R. Butler, M.D.; "Aneurism," by W. N. Belcher, M.D.; "Acute (non-alcoholic) Poisoning," by R. M. Mead, M.D.; "Thermic Fever and Heat Prostration," by F. W. Shaw, M.D.; "Diseases of the Liver," by A. H. Bogart, M.D.; "Gastro-Intestinal Disease," by G. R. Butler, M.D.; "Nephritis," by H. G. Webster, M.D.; "Rheumatism," by R. Clark, M.D.; and "Pregnancy," by H. P. de Forest, M.D.

THE X-RAYS, THEIR PRODUCTION AND APPLICATION. By Frederick Strange Kolle, M.D., Radiographer to the Methodist Episcopal Hospital; Member of the Kings County Medical Society, the Brooklyn Pathological Society, the Long Island College Hospital, and Kings County Hospital Alumni Association of Brooklyn, N. Y. Pp. 250, bound in handsome cloth. It contains about 50 illustrations of which there are 12 full-page half-tone engravings. Price, sent by mail, postpaid, to any address, $1.00. New York: J. S. Ogilvie Publishing Company.

Dr. Kolle is a practical radiographer and has in this volume given the results of his experience and study. He gives his readers a compact description of electricity, so that a beginner in the science will here find all that he need know. He then takes up the theoretical and practical application of radiography to medicine and surgery.

RETINOSCOPY (OR SHADOW TEST) IN THE DETERMINATION OF REFRACTION AT ONE METER DISTANCE, WITH THE PLAIN MIRROR. By James Thorington, M.D., Adjunct Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. Second edition, revised and enlarged. Thirty-eight illustrations, twelve of which are colored. Philadelphia: P. Blakiston, Son & Co., 1898. Pp. 72. Price, $1.00.

This little book describes the method of estimating the refraction of an

eye by reflecting into it rays of light from a plain or concave mirror and observing the movement which the retinal illumination makes by rotating the mirror. The author believes that retinoscopy has great advantages over other methods, and while all ophthalmologists do not agree with him, the number who are using this method is certainly increasing.

ATLAS OF LEGAL MEDICINE. By Dr. E. Von Hofmann, Professor of Legal Medicine and Director of the Medico-Legal Institute at Vienna. Edited by Frederick Peterson, M.D., Clinical Professor of Mental Diseases in the Women's Medical College, New York, etc.; assisted by Aloysius O. J. Kelly, M.D., Instructor in Physical Diagnosis, University of Pennsylvania, etc. Fifty-six plates in colors and 193 illustrations in black. Philadelphia: W. B. Saunders, 1898. Price, $3.50 net.

This volume is made up chiefly of photographs and original drawings of various lesions and pathological conditions taken directly from actual cases. The object of the Atlas is to supply to both medical student and medical practitioner illustrations of the most important occurrences of medico-legal interest.

THE MONTHLY CYCLOPÆDIA OF PRACTICAL MEDICINE AND UNIVERSAL MEDICAL JOURNAL. Edited by C. E. de M. Sajous, M.D. War Number. The F. A. Davis Co., Publishers, May, 1898.

In view of the fact that American troops have been sent to Cuba, and in view also of the fact that in that island there were 32,534 deaths among the soldiers of Spain in 1897, the editor of the Annual has prepared this War Number. It contains an editorial on "Malaria and the Cuban Campaign," an analytical list of the best succedaneæ for quinin, and the most advanced ideas upon the treatment of burns, scalds, and insolation. The next issue will be devoted to the treatment of tropical dysentery and diarrhea, gunshot and other wounds, and venomous wounds and stings. The present number is a most interesting and valuable one.

TWENTIETH-CENTURY PRACTICE. An International Encyclopedia of Modern Medical Science. By leading authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. In twenty volumes. Vol. XIV. Infectious Diseases. Wm. Wood & Co., 1898.

A thoroughly scientific work is this. We prediet for it a large sale and a long life. The articles by A. Jacobi, Dillon Brown, Nathaniel R. Norton, and Joseph O'Dwyer, are of especial value. New York has always been proud of their work and will appreciate this record of it.

EAR RECORDS. A Method of Recording Ear Cases, arranged by John C. Lester, M.D., Fellow of the American Academy of Medicine; Fellow of the American Laryngological, Rhinological, and Otological Society; Assistant Surgeon, New York Eye and Ear Infirmary; Assistant Surgeon, St. Bartholomew's

Clinic, etc.; and Vincent Gomez, M.D., Ophthalmologist to the Almshouse, Workhouse, and Incurable Hospital; Assistant Surgeon, New York Eye and Ear Infirmary; Instructor in Diseases of the Ear, New York Polyclinic, etc. New York: J. W. & Geo. H. Hahn, 26 East Twenty-third street.

The object of this publication is "to present a method of recording ear cases which would at once be practical, suggestive, and time-saving," an "aid for the accurate keeping of records." There are, bound in book form, one hundred and fifty history charts, and twenty-five blank pages, with a lettered index.

The method presented is certainly "suggestive," and an "aid to the accurate keeping of records," but seems to the reviewer to fail in the other two objects, namely, to be "practical" and "time-saving."

The aim has been to put in the chart everything in the way of symptom or test, and nothing seems to have been overlooked which an aurist might wish to make note of, the aurist as he goes through the examination to run his pen through those conditions, etc., which are not present in the given case. To those who favor such a method the "Ear Records" should prove very satisfactory. J. E. SHEPPARD.

THE DISEASES OF THE STOMACH. By William W. Van Valzah, A.M., M.D., and S. Douglas Nisbet, A.B., M.D. Philadelphia: W. B. Saunders, 1898. Pp. 674. Price, $3.50.

To those desiring a ready-reference book on this subject this work will prove acceptable. It reflects the authors' views. They are men of experience. They have given us here a reflex of their experience and have put together a very useful book. The busy man will find it much more satisfactory for every day use than some of the more elaborate productions on this branch.

THE ELEMENTS OF CLINICAL DIAGNOSIS. By Professor Dr. G. Klemperer. Translated by N. E. Brill and S. M. Brickner. MacMillan Co., 1898. Price, $1.00.

As a rule, cheap medical books, like everything else that is cheap, are really good for nothing, but this little book is a notable exception. It is clear, concise, scientific, and up-to-date regarding all the requirements of modern internal medicine, giving the clinician instantly any sign, test, or examination called for, and the student a safe guide in helping him make a diagnosis in any and all the departments of medicine. W. H. HAYNES.

CLINICAL STUDIES OF THE SURGICAL DISEASES OF THE FEMALE GENERATIVE ORGANS. By Lewis Stephen Pilcher, M.D.

The thanks of Dr. Pilcher's medical brethren are due him for the beautiful and instructive monograph he has presented each one of us under the above title. It is a careful summary of his work for comparison by his confrères, a guide for the younger operators in this field, and an honest showing of the character of his work to the whole profession.

The chief point for criticism will be whether it is safe to advise the ex-

cision of such necessary organs as the so little diseased ovaries, so beautifully pictured on pages 82 and 83, and in such well-marked neuropathic cases so well described on page 85. We think it savors a little of the so-called "Battey's operation" for the removal of normal ovaries for like conditions, now happily obsolete.

ANNUAL AND ANALYTICAL CYCLOPÆDIA OF PRACTICAL MEDICINE. By Charles E. de M. Sajous, M. D., and one hundred Associate Editors, assisted by Corresponding Editors, Collaborators, and Correspondents. Illustrated with chromolithographs, engravings, and maps. Vol. I. Abdominal Injuries to Bright's Disease. Cloth, pp. 600.

We look into this book with some interest. We find it to be a systematic treatise by distinguished men, and inserted in their respective places in the text in small type we find the reports of cases illustrating the subjects, and in addition an array of conclusions and suggestions culled from the literature of 1897. It amounts, therefore, to a text-book on medicine, surgery, therapeutics, obstetrics, etc., with a running commentary contributed by the various journals all over the world. It offers, therefore, two attractions, a delightfully clear and readable dissertation on the various diseases under the usual subdivisions, and then, what the profession has evolved out of its experience with those diseases during the past few years. It presents to us the best work of the profession. It is, therefore, a most desirable book. It is one which will reflect great credit on the editor and his coadjutors.

Let us examine the method employed in a particular instance, the article on appendicitis, for example; we find thirty pages devoted to it. The definition adopts the modern theory of microbic origin. It goes into the symptoms very thoroughly. It gives forty extracts from current literature to illustrate those symptoms. We notice with some surprise the omission of that important symptom of suppuration, leucocytosis. Some surgeons take this as the indication for operation. The diagnosis is well illustrated with twenty-six examples; and so we might go on through the various divisions. Suffice it to say, it is up-to-date. The same may be said of the rest of the book. Its object is to give the most complete review of medical works. If the same care is exercised in the preparation of the other volumes as this we will consider it a very valuable addition to our library.

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

ENTERED AT BROOKLYN, N. Y. POST OFFICE AS SECOND CLASS MATTER.

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VOL. XII. No. 10. WHOLE No. 130. | BROOKLYN, N. Y., OCTOBER, 1898. | Single copies 25 cents $2 a year, in advance

ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

REPORT OF A CASE OF ACUTE HEPATITIS.

BY JACOB FUHS, M.D.

Mr. President and Gentlemen: The following case presents so many interesting features and affords so many therapeutic hints that I take the liberty of presenting its history to this Society.

Mrs. X., fifty-nine years of age, married, born in Germany, has had eight healthy children. Her father was well and strong, and lived to the age of seventy-eight years. He suffered from asthma for the last ten years of his life, and died of some acute pulmonary disease. Her mother was strong, but had some liver trouble. She died at the age of eighty, in consequence of intestinal obstruction. A sister of her mother died of some acute liver disease. Her father's family is long-lived. Her brothers are well and healthy. One of her sisters died at the age of six, of scarlet fever. The other sister died at the age of sixty-three, two weeks after the operation for removal of gall-stones. She had been operated upon twenty years previously for the same difficulty. The stones were located in the gall-ducts. She suffered from high fever, and repeated chills occurred during the last

days of her illness. One brother died of dropsy, due to heart disease.

The patient was strong and healthy up to fifteen years ago. She then suffered, off and on, from attacks of pressure at the epigastrium, and at times from more severe pains in the same location. Then the urine became dark. The stools were not examined. The first severe attack of biliary colic occurred twelve years ago. It was typical. She was jaundiced; the urine contained large quantities of biliary coloring matter; the stools were acholic. She was kept in bed for two weeks; though she was over the attack in the course of about a week. She was then apparently well, and complained only at times of slight attacks of catarrhal bronchitis. During last fall and early winter she was much worried. December 5, 1897, she began to complain of faintness, followed by very severe spasmodic pains at the epigastrium, extending to the back and to the right side, along the lower ribs. She had no chill. She vomited green fluids and was very much nauseated. There was only very slight jaundice, the urine was not very dark, the stools had the ordinary color, the pulse was small, the temperature decidedly elevated (104° F.), the liver large and smooth, the lower border of it being distinctly felt; the region of the gall-bladder was not specially sensitive to pressure. The anterior surface of the liver was decidedly tender to touch, and gave the impression of increased firmness. The pain was located at the anterior surface, and only very slightly at the region of the gall-bladder. On the following day a slight swelling appeared, about three-fingers' width above its lower border. It was smooth, and extremely sensitive to pressure, and the seat of the most severe pain. The liver had become still further enlarged during the twenty-four hours. The region of the gall-bladder was not very sensitive to pressure. The fever continued, the jaundice did not increase, and the swelling became more marked from day to day. The pain did not diminish, and remained localized at the region corresponding to the anterior and posterior surface of the liver, but was most decidedly marked at the swelling.

An exploratory operation was performed December 10th, five days after the first onset of her disease, by Dr. Vineberg. The gall-bladder was slightly enlarged, was not congested, and contained one large calculus and many small ones—perhaps, altogether, thirty-nine. There was hardly any hemorrhage. The bile was clear; not at all purulent. *The pain disappeared after*

the operation, the liver became smaller, but the fever continued, though it did not reach a very high mark; the stools became acholic from time to time, until a week after the operation, three more stones were passed, and on the following day one more large stone appeared. The fever then subsided, and she rapidly improved. The liver gradually resumed its normal size; she is free from pain, but still has a fistulous opening leading to the gall-bladder, through which pure bile escapes, especially at night. The bowels are regular, the stools light yellow color, and there is no jaundice.

Cases of this kind are not very rare. I have seen at least five within the last two years, but this is the only one that has been operated early, and in which one was able to confirm the diagnosis with precision. The favorable course of the disease, and its short duration, are in strong contrast to the prolonged suffering and unfavorable termination of some of the others. Though recovery took place in some of the latter cases, it left the patient in an extremely exhausted condition. One would be compelled to recognize the advantages of early operative interference, in contradistinction to the late, and often too late operation, when symptoms of septic poisoning, or cholemia, or abscesses, require the adoption of surgical measures.

The advantages and objections to an early operation in this case are similar to the early operation for appendicitis. Free drainage is as important here as in the operation before mentioned, and the prevention of adhesions of abscesses and septic centers is as necessary here as in the other case.

It is self-evident that one would discriminate about the propriety of surgical interference in different cases, and follow the medicinal plan of treatment for a reasonable time, if the symptoms show a tendency to amelioration. It will have to be left to the judgment of the physician in each case when an operation is called for; the important point being not to wait too long.

The operation itself is simple and devoid of many of the dangers it formerly possessed. There is very little hemorrhage as long as severe icterus has not interfered with the coagulating properties of the blood. The propriety of opening the gall-bladder could be questioned when there was no evidence of inflammation of its walls and when the bile removed from it was free from purulent material. Still, the free drainage of the bile, stagnating in the liver, most probably prevented the occurrence of an abscess in this case. It was certainly an advantage to be able to

remove the calculi from the gall-bladder, aside from the opportunity it afforded to explore the common bile-duct and the common hepatic duct. The gall-bladder having been thoroughly emptied and irrigated, and the biliary ducts having been thoroughly explored and found not to contain any stones, one must conclude that the calculi, appearing a week after the operation, must have been lodged within the liver, in one of the biliary ducts, most probably at the seat of the swelling. One would be the more inclined to assume this from the simultaneous disappearance of the fever and the improvement of the general symptoms.

There appeared to be a decided tendency of the gall-stones descending from the hepatic ducts to enter, by preference, the cystic duct instead of the common bile-duct, perhaps on account of the catarrhal inflammation of this organ.

The swelling of the anterior surface of the liver had disappeared at the time the last stones were passed, and the liver resumed its normal size.

The use of the exploring needle for diagnostic purposes, formerly extensively advocated, should be abandoned, or at least restricted to cases where one could assume the existence of adhesions between the liver and the abdominal wall. To thrust the needle in various directions through the substance of the liver in search of a supposed abscess is not justifiable in the present development of the art of surgery. Through medicinal treatment we may generally succeed in relieving the patient, and surgery will rarely be required in the ordinary run of cases.

We certainly possess in morphia a most valuable remedy for the relief of this form of suffering. Hot saline enemata and hot fomentations are valuable aids in ameliorating the pain. Local abstraction of blood by means of leeches applied along the free border of the ribs on the right side has often proved efficacious when morphia alone would not produce the desired effect.

In looking over this history we observe the prevalence of this disease in the female members of the family, In fact, it seems to be confined to them exclusively. Her mother had some liver disorder and died of intestinal obstruction. One sister was twice operated for the relief of suffering due to gall-stones. The prevalence of gall-stones among the female members of the family cannot be explained by differences of diet, the diet being the same for both sexes.

According to Schroeder, gall-stones are found in 20 per cent.

of females and 4.4 per cent. of males at autopsies. Brockbank found gall-stones in 7.9 per cent. of females and 2.9 per cent. of males. The diet contained considerable nitrogenous substance. She did not take much out-of-door exercise, but was active about the house. She had borne all her children before the first symtoms of this disease appeared. For three years she suffered at intervals from pressure at the epigastrium; at other times, from more severe gastralgias. The urine became dark at times during these attacks. It is of the utmost importance to recognize the cause of these attacks as early as possible. Vomiting often accompanies the gastralgia. They depend, at times, on a temporary closure of the common bile-duct through inflammatory swelling or directly through the presence of gall-stones in the duct. The absence of bile in the vomited matter, the character of the stools and urine, and the presence of even very slight degrees of jaundice will point toward cholelithiasis.

Tenderness over the region of the gall-bladder and the extension of the pains to the back and the right shoulder-blade are evidences of this disease. Slight tenderness over the area of the liver I have often noticed even in mild attacks. Twelve years ago she had a typical and severe attack of biliary colic, and passed six or seven calculi. She obtained great relief from local abstraction of blood, by means of leeches, applied along the most painful points, and the same beneficial effect followed local abstraction of blood in many of my cases. Next to morphia, this is the best remedy. Cold applications are rarely tolerated, while in ulcer of the stomach they are more frequently beneficial. Cold is very badly borne in gastric crises. Small doses of calomel, even very small ones, act as irritants, and cathartics generally aggravate the trouble, if given during attacks; while mild alkalies, the bismuth preparations, and later on small doses of Karlspader sprudel salt act beneficially. Bland diet, containing no vegetable acid, agrees best. Prolonged rest after the cessation of the paroxysms was of great benefit. The patient must be urgently advised to remain in bed until all tenderness at the hepatic region, especially at the gall-bladder, has disappeared. The entire freedom from all symptoms referrable to the liver or gall-bladder for twelve years is to be noted. She followed the directions as to her mode of living and the diet strictly. The prolonged worry was the only exciting cause found to be responsible for the present effect. Prolonged worry occurred in many of my cases, preceding an attack of cholelithiasis, and it seems

to stand in close relation to it. Whether the digestive disturbances caused by worry finally led to a partial or complete closure of the common duct and a stagnation of bile in the gall-bladder and biliary ducts, or whether through it the composition of the bile is altered, must be determined, and this case might afford an opportunity to help us solve this question.

In conclusion I would mention that the following were the symptoms peculiar to this case:

1. A continued fever; not the intermittent, hepatic fever of Charcot.
2. Only very slight jaundice.
3. The gall-bladder was only very slightly enlarged.
4. Very marked enlargement of the liver.
5. No marked tenderness over the gall-bladder.
6. A circumscribed swelling at the anterior surface of the liver, very tender and painful, and about three-fingers' width above the lower border.
7. There was no pus found in the gall-bladder, nor in the discharges from the womb, nor about the gall-stones.
8. The fever did not abate until the gall-stones that apparently came from the ducts had passed.

DISCUSSION.

Dr. H. P. de Forest: Mr. President and Gentlemen:—This case reported by Dr. Fuhs brings out clearly the important features of such cases from the pathologic point of view. The relation of sex is clearly shown, such conditions being much more common in women than in men; I think that the figures quoted by Dr. Fuhs are even lower than many authorities give. Some writers have said that gall-stones exist in twenty-five per cent. of of all women over sixty years of age, and it is generally conceded that in women in middle life they are much more common than in younger persons.

The pathologic conditions which favor this formation we can readily see. The probable cause of gall-stones in all cases is due to the stagnation of the bile in the biliary system, either within the liver substance or within the hepatic, the cystic, or the common duct, or in the gall-bladder itself. In most cases where gall-sones exist in women they are in those patients who have borne children. For in these women the pressure of the pregnant uterus upon the liver and upon the gall-bladder is very considerable. It is also found that in women

who have not borne children, but in whom an abdominal tumor exists, the same cause produces the same effects. After the bile has become stagnant, a desquamation of the epithelium and a disintegration of the bile-pigment often results, thus forming a nucleus around which calculi ultimately form. After the calculi are formed, the pressure continues and favors the occurrence of other symptoms, which are also noted in Dr. Fuhs' case. The first of these is the liability to fever, which is much more likely to occur the nearer the calculus is to the duodenum, for there bacteria are always present. Where the calculus lies within the substance of the liver or at the fundus of the gall-bladder the fever is not so apt to occur. Fever usually lasts several days after the removal of the calculi, and Dr. Fuhs' case also brings out that fact.

The next pathologic condition which develops is necrosis, as a result of pressure. There have been cases reported in which, as a result of this pressure necrosis, calculi have escaped into the abdominal cavity and into nearly all of the hollow viscera; in one or two rare instances even into the pleural cavity. I, myself, presented a case at the Pathological Society two years ago in which necrosis caused an opening communicating with the transverse colon; the adhesions walled off the opening so that there was no peritonitis, and a biliary calculus the size of an English walnut escaped directly into the transverse colon. The woman died of carcinoma some months afterward and the autopsy revealed this opening, large enough to admit the finger, which had been in existence for some months.

So far as the constitution of these various calculi are concerned, in connection with the calculi that have been shown with the previous paper, it is interesting to note, that uric acid does not exist, but that we do have the salts of lime and magnesia. There are four classes of calculi, so far as their structure and composition is concerned: one of these is made up almost entirely of cholesterin. The most common form of all is made up of cholesterin, of bile pigment, and of the salts of lime and of magnesia. Then there are those made up of bile pigment alone. These can be easily distinguished clinically, even without chemical analysis. Cholesterin calculi are nearly always white or very light in color, and they break with a curious radiating crystalline appearance. The ones containing lime salts are darker in color, varying in color according to the amount of bile pigment; while those made up of pigment alone are very dark green, some-

times nearly black. There is still a fourth class, very rare, composed of the crystalline form of calcium carbonate, extremely clear, hard, and like chemical crystals, and without the radiating appearance of the cholesterin one we have had shown us in this Society, in which the walls of the gall-bladder were made up almost entirely of these lime salts.

The gall-bladder itself is the most common site of calculi; then comes the cystic duct, the common duct, and then the bile-duct; and it has happened—but the cases are of extreme rarity—that calculi have been found within the tissue of the liver itself. This case of Dr. Fuhs' is probably one of those extremely rare cases. The swelling which was noted would incline us to that opinion, and if that was the condition it is one of the rarest possible locations for calculi of this nature.

Dr. J. A. McCorkle: Mr. Chairman and Members of the Society:—I was deeply interested in this paper and it has brought out, to my mind, a number of very interesting points. I was somewhat impressed with the history of the patient—in fact, with the heredity to a certain extent—and I believe that gall-stones occur frequently along family lines.

The age of the patient was another important factor; and the doctor, in closing his paper, called attention to the mental worry in this case—the anxiety. I believe it is well-known that the cholesterin of which some of the stones are made up—as Dr. De Forest mentioned—is the result of the disintegration of nerve tissue, and for this reason we very frequently find a cholesterin stone in women—in nervous patients. This occurs in those where gall-stones appear in early life. Then, after middle life, we find that gall-stones are very frequent, and they are not infrequently associated with a gouty diathesis; they are not infrequently associated with atheromatous changes in the arteries; in fact, gall-stones do not occur in a condition of health. There is always some vice of nutrition that will give rise to them, and not infrequently that vice will be centered in the production of acid in the organism; the acids are not destroyed, they are allowed to accumulate in the organism, and they not infrequently will liberate—unlock—the alkalin bases from their chemical combinations in the organism. This we know: that the bile is normally an alkalin secretion. If it become acid, as it will sometimes do, the acid will throw out the cholesterin very quickly, and this acts as a cause; and this condition is very liable to exist after the middle period of life.

Then, again, if we find in the liver lime salts or lime, the presence of lime in the bile will throw down and throw out the coloring matter and thus give rise to calculi; and these two conditions are very frequently associated with the degenerative period of life.

Then, the acid condition is not infrequently brought about by the undue use of the nitrogenized diet, and this, with its production of acid has a tendency to the production of gall-stone.

So in this case that the doctor has so admirably reported, we have have the mental worry, we have the advanced period of life, and, I doubt not, if the doctor were interrogated on that point, we probably would find a tendency to the deposit of urates and uric acid, as well. These conditions are not infrequently combined in the same individual. In the production, then, of gall-stone, I think, as practitioners, we must look to the cause of them. I do not believe by any medicinal agent we can dissolve them, but I believe we can do much to prevent their formation, and especially in the later periods of life. I believed that if we treat the uric-acid diathesis, we can very probably obviate these troubles; and by so doing I believe that is one reason why the soda salts are so valuable in the treatment of hepatic troubles, especially the Carlsbad salt, the phosphate of soda; and we have another combination of soda, which is used so constantly with reference to another disease that we forget its admirable cholagogue properties, and that is salicylate of soda. That is one of the best agents we can use with hepatic engorgement, or when we want cholagogue action—not in large doses, as in rheumatism, but in 15- or 20-grain doses three times a day. As a cholagogue it is a most excellent one; it tends to lessen the tendency to acidity and in lessening the acidity we lessen the tendency to precipitation of the constituents of the bile, and in this way our treatment may be directed to prevent their formation.

There was another point in the paper which interested me very much, and that was the finding of the stones passing into the gall-bladder after the operation. Undoubtedly those were deposited in the biliary ducts somewhere within the liver contents. I hardly know how to explain or accept the theory of the swelling of the liver from the presence of the stone within the bile-ducts, for this reason: that if a stone be deposited in the bile-duct some distance from the common duct, the cystic duct, it is carried onward by the pressure of bile, but that onward journey is

through a vessel the lumen of which increases in size as it goes onward; hence, there must be absence of pain in those cases.

Dr. De Forest spoke of the deposit of the constituents of the bile being due to stagnation. Now, there is a number of conditions that will give rise to stagnation of the bile. These may be in the bile-ducts themselves, for we know that the bile is poured out under the lowest possible pressure and a very slight swelling of any of the tubes will prevent the onward flow of the bile. If, however, the pressure comes from the respiratory movement, the bile is rather squeezed out, but on the other hand we have the pressure of secretion.

There is another condition that is not taken into account sufficiently, in my judgment, to obviate the tendency to stagnation —the long sojourn of the bile in the gall-bladder is a frequent source of gall-stone. There are many people—many nervous people—who will produce a larger amount of cholesterin than others. They are under some therapeutic indication, as they think, not to eat very much, and they will live on one meal or two meals a day. While we know that during digestion the bile is poured out very freely in large quantities, if the patient eats but one meal a day the gall-bladder does not thoroughly empty itself more than once a day, and the sojourn of the bile in the gall-bladder is long continued, and it favors precipitation of its contents, or of its constituents; and this is a source. So that from want of exercise, too long intervals between the meals, and other causes that might be mentioned, we have many factors that enter into the production of gall-stone. The paper, I think, has been an admirable one, because it has brought to our attention what can be done in the way of surgery, and I believe that many of the evil results from the ulcers spoken of, and all that, can be obviated in the hands of the skilful surgeon, and to my mind the advance in this operation has been very great and most commendable within the last ten years.

Dr. Delatour: It has been my fortune to have quite a number of cases of gall-stone operations, particularly, though, in connection with empyema of the gall-bladder developed on the presence of stone. There are several points in connection with these cases that ought to be brought out. One is the comparatively low mortality of the operation—the operation of opening the gall-bladder is attended with very low mortality. Operations on the ducts, of course, has a rather larger mortality, but still is not such an extremely difficult and hazardous operation. If the gall-

stones are allowed to remain in the gall-bladder and continue their irritation, they will set up first, most likely, an inflammation of the walls of the gall-bladder, with thickening of the bladder walls, and finally a collection of mucus and pus in the cavity and the distension of the gall-bladder to an enormous extent. With the development of the fluids in the gall-bladder the symptoms may be more or less acute. In some cases they are as acute as in a severe case of appendicitis; in other cases, they are slow and chronic, with immense distension of the gall-bladder. Other cases, instead of setting up an acute inflammation, will be accompanied by, or will set up, a malignant growth. I think this a very important thing to bear in mind. I have seen within the last two years three cases, one of which, I think, Dr. McCorkle saw, also; one in a man, and two in women, of primary carcinoma of the gall-bladder, which could be, I think, quite distinctly traced to the long presence of gall-stones within the gall-bladder. When we come to that stage, of course, operative interference is useless. The first case was a man about forty years of age, who had attacks of biliary colic extending over some twelve years, but had never considered them of sufficient importance to have the stones removed. He developed carcinoma of the gall-bladder and secondarily of the liver, from which he died.

I had one case which was particularly interesting to me, although the final outcome was not what I desired. A woman of thirty-five or thirty-six years came to me with all the signs of biliary colic, and on opening the gall-bladder I removed fourteen stones. I carefully followed down the ducts and could find no trace of stones whatever. She was perfectly well for about four months when she began to have a return of the colics, and two months later I operated again and found two stones in the gall-bladder, three in the common duct, and one in the bile-duct just at the entrance of the liver. One of the stones at the common duct was at the point where it passes through the intestinal wall. These stones were all removed without much difficulty and the patient made a fairly rapid recovery from the operation. Her symptoms soon recurred and she died about three months after the second operation, and at post-mortem two stones were found in the duct close to the liver, and four or five stones we found in the liver substance itself.

The second lot of stones which I removed from the common bile-duct were certainly too large to have been formed within the period of time existing between the two operations, and they

were too large to have been overlooked in the first operation if they had been in the position in which they were found at the second.

The presence of gall-stones, we must remember, is not necessarily accompanied by jaundice, and in the cases of empyema of the gall-bladder I think of some twelve cases operated on by me, in only three was jaundice present, and one of them was the case just recited. The points to be emphasized are the comparative ease and low mortality of the operation, and the dangers of malignant developments if the gall-stones are left in place.

Dr. E. Reynolds: When the gentleman speaks of pressure from a tumor being the cause of the frequency of these gall-stones in women and men, would not that pressure be made by the wearing of corsets? The pressure from corsets, I should think, would have something to do with it, as it is so much more frequent in women than in men.

Dr. De Forest: Mr. President, I did not attempt to go exhaustively into the subject. It is well-known that movable kidney, movable liver, and the so-called "corset liver" are much more frequent than in men. The probabilities are that the corset or the habit of wearing a constricting band around the waist, is a very active agent in producing these results. Pressure, in general, from whatever cause it may arise, is one of the important factors to be taken into consideration.

Dr. Delatour: Mr. President, may I say one word more? I just rise to emphasize the statement of Dr. Fuhs in his paper, of the inadvisability of using the exploring needle in these cases. I think in this age where the exploratory incision can be made with so much safety, it is not justifiable longer to use the exploring needle to poke around hunting for abscesses.

Dr. A. T. Bristow: There is only one point that I care to mention, and that is this: that in most cases of empyema of the gall-bladder, or in many of them certainly, there has not been a previous history of colic, and I presume that is due to the fact that in these cases the stone is usually of large size. I have operated a number of times for acute empyema of the gall-bladder; one case, in particular, in which the symptoms led the attending physician to suspect intestinal obstruction; and, by the way, in the books that very point is mentioned—that acute empyema of the gall-bladder very frequently simulates intestinal obstruction, as it did in this case. I cut down upon the gall-bladder and removed fifty-five calculi, all quite large, yet the first symptoms that this

woman ever had of trouble in her gall-bladder were the symptoms that caused her attending physician to suppose she had intestinal obstruction. Where, however, the gall-stones are small, as in a case I had this summer where I removed 578 stones from the gall-bladder; very frequent and exhausting attacks of hepatic colic are common. The point I wish to make is this: that the mere fact that a patient has not suffered from biliary colic is not by any means a proof that there may not be present an empyema of the gall-bladder due to the presence of gall-stones plus a secondary infection from the duodenum.

Dr. J. C. Cardwell: I would simply like to ask a question. Dr. McCorkle referred to cholesterin as one of the disintegration products of nerve tissue; and I was interested merely in that point, if I am not off the question. I merely wanted to ask what proof we have that such is the case. The only proof I know of is that given by Austin Flint, in a paper published some time in the sixties; and the evidence which he gives there, it seems to me, is *inadequate.* He analyzed the blood of the carotid artery in dogs and the blood of the jugular vein for cholesterin; but he did not prove the method which he used for the separation of cholesterin to be a reliable one, and it is very difficult to get a method—I mean we cannot extract cholesterin and the whole of the cholesterin from a tissue and estimate it quantitatively, because of the difficulty of separating the cholesterin from the fats which are usually associated with it and other substances which are soluble in the solvent used to dissolve out the cholesterin; and, further, the figures which Flint gives are so various that it seems to me that his figures alone prove that the limit of his error is greater than the difference in the amount of cholesterin which he gets between the two sorts of blood, which vitiates entirely his results. It is possible that there is some evidence. If there is, I was simply interested in the question, and would like to know where to find it.

Dr. J. D. Sullivan: I noticed that the treatment of biliary colic with olive oil was not mentioned by any of the speakers. While I have little or no confidence in its efficacy, it is a remedy which has frequently been praised very highly. When the writer is summing up I would like to hear his views on the subject.

Dr. Fuhs: In reference to olive oil, in this case injections of olive oil were made into the bladder through the fistulous opening—through the wound—and each injection caused a severe attack of colic, which was described by the patient as exactly

similar to the attacks of biliary colic, that she was so well acquainted with. In this case olive oil had not been used in any other way but this. If it does no more good by the mouth or rectum than it did by direct injections, I think it might as well be omitted.

I thank you for the many interesting points that the discussion of the case has brought forth.

THERAPEUTIC RESULTS IN NERVOUS SYPHILIS.

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Syphilitic affections of the nervous system present themselves to us under three conditions: Those occurring during the active manifestations of the disease, those occurring as the result of a long-continued action of the poison on the nervous system, and those occurring as the result of infection of the ovum by the parent. In the first set of cases we may find only a toxic neurasthenic condition, or we have a diffuse cellular infiltration of the membranes and nerve-sheaths with a marked tendency to an accumulation of these cells into various sized masses as tumors. The extent and situation of these lesions varies widely in the different cases. These changes have a natural tendency to occur rapidly, and often disappear spontaneously, but they not infrequently undergo degenerative or fibroid changes resulting in permanent lesions. In the blood-vessels we may have the same diffuse infiltration or local deposits affecting the arterial walls, and resulting in occlusion, aneurism or rupture. These different changes are, as a rule, most marked about the base of the brain and in the cord.

Thus it will be seen that besides a diffuse inflammation from which recovery is possible, we may have also at this stage permanent lesions formed by either the cheesy or fibroid changes in the gummatous masses or from arterial disease.

In the second set of cases we find that certain sets of nerve-cells and fibers become the seat of parenchymatous degeneration and disappear while the surrounding neuroglia and connective tissues are increased.

In such a condition as this there can be but little chance that the destroyed neurons will ever be replaced. The best that can be hoped for is that by removing the toxic influences we may save those elements which are not yet the seat of disease, and possibly some of the nerve structures which are only partially degenerated and functionally inactive.

We find this condition occurring as a diffuse process in the cortex and affecting different systems in the cord.

In the third set the disease may show itself by faulty development of the nervous system in varying degree, or we may find the same lesions as in the acquired forms, and these may not appear until years after birth, even as long it is claimed as 18 and 23 years. Of course in cases of faulty development all that can be done is to educate the defective parts to perform their functions as well as they can, and in the other cases the treatment and prognosis are the same as in the acquired form.

I propose now to lay before you the results obtained from the various plans of treatment in the different forms of nervous syphilis which have come under my care in hospital and dispensary practice during the past few years. Neurasthenia due to the action of the syphilitic poison does not, as a rule, come under the care of the neurologist. Of this condition I have the record of only 3 cases, all males, whose ages varied from 20 to 30, the average being 26. The age at the time of infection varied from 19 to 28, the average being 21. The secondary symptoms were severe in all. The duration of the present trouble varied from 4 to 6 months. These cases were all on the mixed treatment when seen, which was continued with a cure in from 4 to 12 months.

Neuritis is occasionally due to syphilis occurring both in the parenchymatous and interstitial forms. Of this I have also 3 cases, all occurring in males whose ages varied from 26 to 44, the average being 33. The age at the time of infection varied from 18 to 26, the average being 22. The secondary symptoms were mild in two of the cases and severe in the other. The duration of the present trouble varied from 2 to 4 weeks, and they had all been on the mixed treatment for about 1 year. One was placed on the mixed treatment and discharged cured but has since relapsed; one on the iodid in moderate doses, and the other in large doses with the result of a permanent cure in both. The next condition to which I ask your attention is the one in which we find the cellular infiltration forming neoplasms of such size as to over-

shadow the symptoms arising from other conditions. Of these I have 10 cases, and all but one were males. Their ages varied from 11 to 64, the average being 35. The age at which infection occurred varied from 14 to 45, the average being 30. The secondary symptoms were mild in 5 and severe in 5. The duration of the present trouble varied from 1 month to 6 years, the average being 2 years. Three of the cases had previously received the iodid in large doses, and 7 the mixed treatment in medium doses. Seven of these cases were put on the iodid in 10 grain doses 3–4 times a day with the result that 2 were cured, 3 improved, 1 unimproved, and 1 died. One received 90–120 grains of the iodid 3 times a day and was cured. Two received the mixed treatment and were discharged much improved. The duration of the treatment varied from 2–6 months in the successful cases, 1 year in the unimproved, and 6 months in the fatal. In one of the improved cases this was the second attack, and in the fatal case the third. Three of these cases have since relapsed.

The next set of cases are those in which the lesions occur as a diffuse process involving the cerebral meninges. Of these there were 6 cases, all males, whose ages varied from 6 to 64, the average being 36. The age of infection varied from birth to 45, the average being 24. The secondary symptoms were marked in only 1 case. The duration of the present trouble varied from 3 weeks to 17 years, the average being 5 years. Four of these cases had received the mixed treatment in moderate doses for a period varying from 2 months to 1 year. One case was placed on the thyroid extract, 3 on the mixed treatment, and 2 on the iodid in moderate doses with the result of a cure in the thyroid case, an improved and a cure in the cases treated by the mixed treatment, and a cure in the iodid cases. Two of the mixed-treatment cases and 1 of the iodid cases have since relapsed. In the next set of cases we find the same process involving both the cerebral and spinal meninges. Of these there were 3 cases, 2 males and 1 female, whose ages varied from 37 to 58, the average being 49. The age at the time of infection was in the males 50 and 29, and that of the female unknown. The secondary symptoms were absent in 1, mild in 1, and marked in the other. The present trouble had lasted from 6 months to 2 years, the average being 1 year. The previous treatment was in the males, the mixed for a period varying from 3 to 12 months, 3 of the cases was placed on the iodid in moderate doses, and the other 2 on

the mixed treatment with the result of a cure in all but the case treated by the iodid which has since relapsed.

In the next set we find the lesion showing itself by the formation of a neoplasm compressing the cord. Of this there were 2 cases, both males, whose ages were 27 and 38, and the age at time of infection 25 and 28. The secondary symptoms had been marked in both cases, and the present trouble had existed for a period of from 2 weeks to 1 year. They had both previously received the mixed treatment for 6 months in 1 case and 3 years in the other. One case was placed on the iodid in large doses, and the other on the mixed treatment. Both were under treatment for 6 months and discharged as cured. The case which received the iodid was his second attack, and the other has since relapsed.

In the next set we find the process showing itself as a spinal meningitis. Of this there was 2 cases, both males, aged 31 and 34, the age of infection was 27 and 29, the secondary symptoms were mild in both, and the present trouble had existed from 3 weeks to 2 years. One of these cases had received no previous treatment, and the other the mixed for 6 months. One was placed on the iodid in moderate doses, and the other on the mixed treatment, and both were discharged as cured at the end of 3 months, but the one which received the mixed treatment has since relapsed.

In the next set we find the disease showing itself by involving the cerebral arteries and causing an occlusion: Of this there were 4 cases, 3 of which were males, the ages varied from 38 to 60, the average being 52, the age of infection varied from 20 to 43, the average being 36, and the secondary symptoms were mild in all. The present trouble had existed from 1 to 10 months. Three of these cases had previously received the mixed treatment. They all received the iodid in moderate doses for a period varying from 3 months to 3 years, and were discharged as improved. In 2 cases this was a second attack.

In the next set we also have the symptoms arising from arterial disease resulting in a rupture. Of this there were 4 cases, all males, whose ages varied from 23 to 46, the average being 35. The age at the time of infection varied from 19 to 35, the average being 26, and the secondaries were mild in all. The duration of the present trouble varied from 1 to 8 months. One case had previously received the mixed treatment for 1 year. They were all placed on the iodid in moderate doses for periods varying

from 9 to 12 months, and discharged as improved. The present attack was the second in 2 of the cases, and 1 of the others has since had a second stroke.

We have then as the result of treatment of nervous lesions occurring in the active stages of syphilis 37 cases. Twenty-one of these received the iodid of potassium in moderate doses, with the result that 8 were cured, 11 improved, 1 unimproved, and 1 died. Three received the iodid in large doses with the result of a cure in all. Twelve received the mixed treatment with the result of a cure in 7, improved 3, and unimproved 2. One case received the thyroid extract with a cure as the result.

As to the permanency of these results as far as can be ascertained 3 of the cases treated by the iodid in small doses have relapsed, and of those on the mixed treatment 4. There seems to be a relationship between the severity of the disease as shown by the secondary symptoms and the occurrence of relapses, for of the 11 cases in which the secondary symptoms were severe 6 relapsed one or more times, while of the 26 in which they were mild only 5 did so.

There seems to be no definite relationship between the severity of the disease and the time which elapsed between the date of infection and the development of the nervous lesion, it being from 2 to 25 years in the mild cases, and 2 to 21 years in the severe; however, the majority of the severe cases did develop at an earlier period than the mild, the average being 1 year earlier.

There is absolutely no relationship between the results obtained by treatment and the entire time during which the whole disease or the nervous lesion has existed. Another fact is very evident, and that is, that all the cases in which relapses occurred only remained under treatment for from 2 to 6 months, while in those which were treated for longer periods this did not occur.

Of the degenerative diseases of the nervous system which seem to be due not to inflammatory action, but to degeneration and death of the neuron from exposure to the toxin of the disease, locomotor ataxia is by far the most common. It is peculiar in the fact that as a rule it occurs in cases in which the secondary symptoms are very slight, and in that it does not begin to develop until years after the infection. Cases, however, do occur at a much earlier period, sometimes only a few months after infection, and those which I have seen have run for this disease a rapid and fatal course. Of the 25 cases of which I have a record, 22 were in males, their ages varied from 28 to 70, the average

being 49, and the secondary symptoms were marked in only 1 case, absent in 2, and mild in the others. The disease had existed from 2 to 20 years, the average being 7 years. The time between the initial lesions and the development of the locomotor ataxia varied from 1 to 36 years, the average being 15 years. Of these 16 had previously received the mixed treatment for periods varying from 2 months to 3 years, and 6 the iodid. The others had had no previous treatment. Of these 12 were given the iodid in moderate doses for from 2 months to 4 years with the result that 1 was improved, 9 unimproved, and 2 died. Five received the iodid in large doses with the result that 2 remained unimproved, 1 became gradually worse, and 2 died. Eight received the thyroid extract with marked improvement in 1, slight in 3, and no improvement in 4. It seems, therefore, from this that with any plan of treatment we may adopt there is, except in recent cases, but little hope of curing the disease, but it does seem possible often to arrest the further progress of the disease: it seeming to make no progress for many years, and the patients finally dying of some other trouble. The greatest improvement that I have seen has been in the cases treated by the thyroid extract. Two of these cases were unable to stand when first seen but were able to walk quite well at the end of 3 months. The iodids in large doses also have given good results, but they should be pushed with caution, never to the point of lowering the patients vitality, for when this occurs the disease often subsequently runs a more rapid course complicated by bed-sores and other trophic disturbances, as it did in the 2 fatal cases treated by this method. A similar lesion, occurring as a diffuse process in the cortex and associated with changes in the membranes and arteries, gives rise to the disease paralytic dementia. Not only in its pathology, but also in its history it bears a strong resemblance to locomotor ataxia. Like it it does not occur until years after the primary infection, and usually in cases in which the secondary symptoms are mild or absent, and not infrequently it occurs in the unfortunate victims of hereditary syphilis. Unfortunately most of the cases which I have seen have been in public practice where no reliable history was obtainable, and the etiological relationship of syphilis has been undoubtedly much larger than my figures would indicate. Of the 4 cases in which histories were to be obtained all were males whose ages varied from 37 to 45, the average being 41. The age of infection varied from 20 to 25, the average being 22. The secondary symptoms were mild in 1

case and absent in the others. Two of the cases had previously received the mixed treatment for about 1 year. Two of these cases received the iodid in moderate doses, and 2 the thyroid extract, with the result in the cases treated by the iodid that 1 grew gradually worse and the other died. Of the 2 which received the thyroid extract both remained stationary for a period of 6 months during which they were under observation. It is an open question, however, whether this stationary period may not have been one of those, often of considerable length, which sometimes occur in the natural history of this disease.

Epilepsy not due to gross lesions such as tumors, meningitis, hemorrhages, or thromboses as the result of syphilitic changes, but to a diffuse cortical degeneration is also not an uncommon late sequela. Of this form I have the record of 4 cases, all males, whose ages varied from 29 to 42, the average being 35. The age of infection varied from 21 to 35, the average being 26. The secondary symptoms were mild in all. Two had previously received the mixed treatment for a few months. The present trouble had lasted from 3 to 12 months. Two were given the iodid without any effect, 2 the mixed treatment without improvement, and 1 the thyroid extract with some improvement.

The results obtained then in these 34 cases of degenerative neurosis, due to prolonged exposure of a nervous system which may have been also predisposed to such changes from inherited or acquired weakness, are 15 which received the iodid in moderate doses, with the result that 1 improved, 8 remained unchanged, 4 grew worse, and 2 died. Of the 5 cases which received the iodid in large doses two remained unimproved, 1 was worse, and 2 died. Of the 3 which received the mixed treatment 1 improved, and 2 remained unimproved. Of the 11 which received the thyroid extract 6 improved, and 5 remained about the same. There seems to be no relationship between the results obtained and the duration of the treatment or the time which had elapsed since infection or the development of the neurosis. The period of time which elapsed between infection, and the development of the neurosis varied from 2 to 36 years. The secondary symptoms were marked in only 1 case, and very mild in 28, and absent in 5. Seventeen had previously received the mixed treatment for periods varying from 3 to 24 months, 6 the iodid alone for like periods, and the others had received no treatment. In the cases which received no previous treatment the neurosis as a rule developed at an earlier period than in those that did, and finally

these results would indicate that though antisyphilitic drugs such as mercury and the iodid may be relied upon to combat nervous lesions occurring during the active manifestations of the disease, they do not seem to have much power over the degenerative neurosis which occurs as a sequela of this disease.

SHALL THE UTERUS BE LEFT AFTER BILATERAL SALPINGO-OOPHORECTOMY? A REPORT OF FORTY-FIVE CASES.

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Gynecologist to St. Peter's Hospital.

Read before the Brooklyn Gynecological Society, March 4, 1898.

Whether a healthy uterus shall be allowed to remain *in situ* or extirpated along with the tubes and ovaries, has been much written of and still more talked about during the past three or four years. We are all familiar with the positive statement of some of our most competent observers, to the effect that the uterus, when it alone of the internal sexual organs remains, is not only useless, but likewise very dangerous to its possessor, being liable to all sorts of degenerations, new growths, inflammations, etc.; and still more, that when it is left the patients are not cured, but continue to suffer as before the operation; and how, on the other hand, equally skilled operators just as positively tell us that to remove the uterus, when not itself diseased, is all wrong and should be considered criminal; that the uterus is not a danger to the patient; that it is not as liable to the retrograde changes, etc., as before the appendages were removed; that the patients are cured, and that the uterus is of positive and vital use to the individual.

The arguments on each side of the question are too familiar to you all for me to more than touch upon them.

Even if I were convinced that the uterus was of no *use*, under these conditions I should also wish to be assured that it was a positive menace to life or health, for me to consider it wise to remove it as a routine practice when operating for diseased adnexa, for I think it cannot be successfully denied that the operation, when it is allowed to remain, is an easier one of accomplishment than when it is removed, and this is more particularly true when the operation is done through an incision in the ab-

dominal wall. I have never been especially gratified with my success in cases in which I have done the operation through the vaginal incision, when there has been anything to remove other than a collection of of pus pointing in the cul-de-sac; this, with my therapeutic results in cases before this subject was so much discussed, is the basis of my opinion.

Of the cases that have not been relieved by a bilateral salpingo-oophorectomy, and in which a subsequent hysterectomy was done by various operators, with a cure resulting, there is a paucity of reports.

It is not my intention to offer any theoretical arguments in justification of the affirmative side of this question. I prefer rather to present some facts and results for your consideration.

I have tabulated forty-five cases from which both tubes and ovaries were removed and in which there was no particular disease of the uterus other than lacerations and inflammations. If one ovary or part of one, or one tube or part of one, was left, such case is not included in this list.

The longest period since the operation was done is four years and the shortest is six months. I determined upon the latter time because, as a rule, any beneficial mental effect the operation may have had will have disappeared by that time and the true result will be apparent.

Of these, 5, all pus cases, died; and 40 recovered—a mortality of 10.1 + per cent. Thirty-eight were pus cases, 6 were cases of chronic tubo-ovarian inflammation of varying degrees, and 1 was hydrosalpinx. The youngest was seventeen years old, the eldest fifty. Forty were married and five were single. The shortest time that any patient remained in the hospital was twenty days and the longest forty-two days. The deaths were all from the pus cases. Of these 38 cases, all but 2 were operated from above and gauze drainage was employed in 24 cases. Of the total number, 3 were operated on through the vagina.

There is no case included in this list in which the collection of pus was not apparent to the eye in either tube or ovary, one or both. In no instance was the uterine end of the tube found patulous. The cases that died are of more interest than those that recovered, therefore I will speak of those more in detail.

No. 10.—Mrs. F., aged twenty-two, married five weeks, was menstruating at time of marriage, April 24th, and was not again unwell until May 31st, when her flow came on with severe, crampy pains in left side, profuse flow, and clots, and she was

No.	Age.	M.	Operation.	Disch'ged.	Condition.	Diagnosis.
1	27	Yes.	Mch. 8, 1894	April 17	Recovered	Double pyosalpinx.
2	22	"	June 25	Aug. 3	"	" ovarian abscess.
3	36	"	September	November	"	" tubo-ovarian abscess.
4	34	"	Dec. 3	Jan. 16	"	" pyosalpinx.
5	29	"	Dec. 14	Jan. 25	"	" tubo-ovarian abscess.
6	24	"	Feb. 21, 1895	March 24	"	Chronic salpingo-oophoritis.
7	26	No.	Feb. 25	March 20	"	Ovarian neuralgia.
8	33	Yes.	April 20	June 14	"	Double pyosalpinx (opium habituée).
9	27	"	May 28	July 1	"	" " (right ruptured).
10	22	"	June 4	June 10	Died	" " (abdomen re-opened, sepsis).
11	23	No.	July 8	Aug. 14	Recovered	Double pyosalpinx.
12	21	Yes.	July 8	Aug. 1	"	" "
13	29	"	July 16	Aug. 11	"	" "
14	21	"	July 29	Aug. 19	"	" "
15	25	No.	April 23	May 31	"	Chronic salpingo-oophoritis.
16	23	"	May 18	July 5	"	Left ovarian abscess, right pyosalpinx.
17	35	Yes.	Aug. 23	Aug. 28	Died	Double pyosalpinx (right ruptured).
18	25	"	Aug. 9	Sept. 10	Recovered	Double pyosalpinx.
19	24	"	Sept. 25	Oct. 25	"	" "
20	20	"	Dec. 20	Jan. 13	"	" tubo-ovarian abscesses.
21	50	"	Jan. 15, 1896	Jan. 19	Died	Appendicitis, double pyosalpinx, carcinoma of right tube.
22	26	"	Jan. 17	Feb. 24	Recovered	Pyosalpinx, left ovarian abscess.
23	30	"	Jan. 24	March 6	"	Double tubo-ovarian abscess.
24	34	"	Jan. 27	March 1	"	" " " "
25	36	"	Feb. 21	March 21	"	Chronic salpingo-oophoritis.
26	38	"	March 16	April 19	"	Double tubo-ovarian abscess.
27	26	"	May 7	May 27	"	" pyosalpinx.
28	40	"	May 15	June 5	"	" " (right ruptured).
29	45	"	June 22	July 22	"	" " peritubal abscess.
30	28	"	Sept. 22	Oct. 29	"	" "
31	45	"	Oct 19	Dec. 1	"	Peritubo-ovarian abscesses.
32	28	"	Oct. 23	Nov. 13	"	Chronic salpingo-oophoritis.
33	31	"	Dec. 10	Jan. 10	"	" " " retroversion.
34	46	"	Jan. 15, 1897	Feb. 26	"	Double pyosalpinx (left ruptured).
35	30	"	Jan. 26	Feb. 20	"	Right pyosalpinx, left ovarian cyst.
36	37	"	Jan. 30	Feb. 28	"	Double pyosalpinx, ovarian cyst.
37	26	"	Feb. 25	March 24	"	" " " abscess.
38	21	"	March 3	March 28	"	" "
39	37	"	March 3	April 3	"	" hydrosalpinx.
40	17	No.	May 13	June 12	Recovered	Double tubo-ovarian abcess.
41	41	Yes.	June 6	June 8	Died	" pyosalpinx, opening into the bladder and rectum.
42	26	"	June 12	June 15	"	Double tubo-ovarian abscess, tertiary syphilis.
43	19	"	July 6	Aug. 6	Recovered	Double tubo-ovarian abscess, both ruptured.
44	36	"	July 14	Aug. 7	"	Donble tubo-ovarian abscess.
45	28	"	Aug. 7	Aug. 28	"	" pyosalpinx.

obliged to go to bed. On admission to the hospital her temperature was 101½° F.; pulse, 160; abdomen considerably distended. Diagnosis was made of either ruptured tubal pregnancy, or pyosalpinx. This was the only case of acute suppurative salpingitis I have ever operated upon. The tubes were both found almost free in the pelvis, there being only slight adhesions; they were large and swollen, and on manipulation a clear, creamy pus poured out from the fimbriated ends; this had the characteristic odor of gonorrheal pus. There was no microscopical examination. The abdomen was closed without drainage and I think its omission killed the patient. Symptoms of peritonitis developed almost immediately and she died on the fifth day after operation. The abdomen was reopened twenty-four hours before death.

No. 17.—Mrs. O., aged thirty-five, married six years, and the mother of one child five years old; had been complaining six months; for that length of time had had at intervals, at first, becoming constant, severe, crampy pains in the right side, low down, never in left side, but so severe as to compel her to go to bed. Menstruation had been painful but not profuse. A few days before I saw her she had been admitted to a hospital in Manhattan Borough, where she lived, but was not able to be brought to the attention of the operating surgeon for several days and she had returned to her home when I saw her. She had only a slight elevation of temperatnre, but a rapid and feeble pulse, and was pale and anemic. When the abdomen was opened the pelvis was found completely shut off by an apron of intestines and omentum, and it required much labor to get into the pelvis. The right tube was slightly ruptured and pus could be seen in the free pelvic cavity about it, and was increased in the enucleation; the tube was just six inches long and was almost straight, extending from just under the abdominal wall to the bottom of the pelvis. The left tube was not as long, was coiled upon itself, and was removed without rupture. After washing out, gauze drainage was employed. She did not rally well from the ether and died on the fourth day after operation from peritonitis.

No. 21.—Mrs. M., aged fifty, married, and the mother of two children, the last twenty-eight years before. Contracted gonorrhea from husband three years previous, and had been sick ever since, but had been able to be about the house most of the time until she entered the hospital. Menstruation had been too frequent, but not especially profuse or painful; there had been a gradual loss of flesh and strength. This was the most difficult case I have operated upon of its kind. The pelvis was simply solid with inflammatory deposit surrounding the uterus, appendages, and intestines. The cecum was low down and behind the uterus; the appendix suffered the same ravages as the other structures and was removed. Neither tube contained much pus, but the right one was much enlarged and the microscope showed it to be carcinomatous. Gauze drainage. Strange to say she did well for two days, but developed peritonitis and died on the fourth day.

No. 41.—Mrs. H., aged forty-one, married nine years but never pregnant. For four years had suffered with severe pain in left side and had at repeated intervals discharged pus by rectum and fecal matter with the urine. In determining these conditions

the microscope was used. At the time of operation both the openings into bowel and bladder were temporarily closed. The adhesions were unusually dense and difficult of separation. Twelve hours after the operation the pulse was 90 per minute, and temperature 99° F., with no vomiting. In twenty-four hours the pulse was 160 and the temperature 97½° F. Having gotten into this condition within a few hours I felt sure I had a hemorrhage to deal with, and hurriedly reopened the abdomen; but instead of blood, the cavity was filled with thin, watery pus, and death followed in a few hours. There had been no drainage, which was an error of judgment.

No. 42.—The only particularly interesting feature of this case was the tertiary syphilis, which had existed some years, and, with the double tubo-ovarian abscess of which she had had symptoms for two years, rendered her condition most unfavorable for any surgical procedure, and she died of sepsis.

In analyzing my deaths I can but feel that cases 17, 21, and 42 had a right to die, and that no skill or care on my part could have changed the result. Nos. 10 and 41 I believe died for want of proper drainage.

Of the forty who recovered I have been able to follow, either by letter or personal observation, all but four. And I am gratified to be able to report that the results are all that I could wish for in all but two cases, and by that I mean that they are no longer invalids, but that they can perform their duties in their various callings, and are useful members of society, and have not contributed to any extent to the support of the medical profession.

I quote a few expressions which were used in describing their conditions: "Well, I have not been in as good health since I was a little girl." "Perfectly satisfactory." "I feel like there was never anything the matter." These simply for illustration. The disappointing cases were Nos. 7 and 31. The first, the most pronounced case of pelvic neuralgia—I use this term for want of a more scientific one—I have ever encountered, and should never have been operated upon. She came under my care five years before operation and was constantly asking for relief. All else having failed, I took out the appendages. Her condition now is not, I think, worse than before.

No. 31 was a case in which there was more pus outside the tubes than in them. The collection of pus was pointing in the vagina and was, therefore, attacked by that route. The append-

ages were gotten out with much difficulty, despite the fact that she had a large vagina and a complete laceration of the perineum. She writes me that though better than before the operation, she is not at all well.

I am much indebted to my associate, Dr. J. F. Todd, for valuable aid in tabulating these cases.

THE OPERATIVE TREATMENT OF VARICOSE ULCERS.

BY ARTHUR H. BOGART, M.D.,
Assistant Surgeon to the Kings County and Methodist Episcopal Hospitals.

Read before the Brooklyn Surgical Society.

Those who have had experience in the dispensaries of this city will agree that leg ulcers contribute largely to the material of the surgical clinics, and that for the most part even with careful attention, after the usual methods of treatment, the results are not always satisfactory.

Not infrequently such cases present themselves with a history extending over a number of years, during which time they have consulted various doctors, and have visited numerous charitable institutions, with the result of obtaining at times a considerable degree of relief and an occasional cure.

The fact that these patients do wander around from place to place for an indefinite period of time without obtaining permanent relief is, in the opinion of the writer, due (to a certain extent at least) to the treatment which they receive; for, having exhausted the numerous and much-lauded remedies of the average housewife, together with those of their friends and the neighboring druggist, they finally appeal to the dispensary surgeon, where they usually make their own diagnosis, and the surgeon, who, either from lack of interest in such cases, or (as too frequently happens) for want of proper material with which to dress them, prescribes an ointment, with instructions to apply the same night and morning, and to return when the supply has been exhausted. This frequently happens without even the formality of an examination, however superficial.

The results are shown in the cases themselves. They do not improve, but go on from bad to worse until finally they reach a chronic state, when the patients entertain almost no hope of re-

lief and consider of doubtful value any suggestion offered for the improvement of their condition.

Such are the cases as found in the wards of the County Hospital, and it is with these that we have had more particularly to do.

While this paper deals only with the operative treatment of varicose ulcers, I would not for a moment wish to be considered as condemning the palliative treatment. On the contrary, I believe that much can be done for their relief by adopting the less radical measures. But I am also confident, as a result of a somewhat limited experience, that in order to be to any degree successful, an unlimited amount of care and patience is necessary. They must be seen at regular intervals, dressings suitable to each individual case must be carefully applied, and the limb properly bandaged.

If these principles are adopted and carried out with painstaking care , a fair amount of success may be expected. But as Holloway says, "Whatever plan of treatment succeeds in aiding the ulcer to heal, leaves the limb in such a condition on account of the varicosity, as to render the reopening of the ulcer or the formation of others, under slight exciting causes, probable."

This being the case, it would seem that the more scientific treatment of leg ulcers should begin, when possible, with the removal of the cause, and with the idea of permanent, rather than temporary, relief.

As I have seen these cases, the lesion is found most frequently somewhere between the knee and the ankle, and usually on the anterior and lateral surfaces of the limb, where the element of pressure undoubtedly plays an important part both in their development and also in retarding the healing process. This particular locality is drained by the internal saphenous vein and its branches, which it will be remembered "commences on the inner side of the arch on the dorsum of the foot, ascends in front of the inner malleolus and along the inner side of the leg behind the inner margin of the tibia. At the knee it passes behind the internal condyle of the femur, ascends along the inner side of the thigh, and, passing through the fascia lata, terminates in the femoral vein about one inch below Poupart's ligament, receiving in its course numerous branches from the thigh and leg. The valves, from two to six in number, are more numerous in the thigh than in the leg."

Early in the history of surgery varicose conditions of this

vein and its branches were recognized as causative factors in the production of ulcers, and at the same time efforts were made for their radical cure. In this connection Trendelenburg mentions Celsus as operating in these cases with the actual cautery, and describes an operation by Paulus of Aegina as follows, *viz.:* a snug bandage was applied over the upper part of the thigh and the course of the vein marked out in ink; a second bandage was then applied above the knee, and the vein exposed, the bandages were then loosened and the ligatures applied, the upper of which was tied and the vein divided; as much blood as would was then allowed to escape and the lower ligature tied; the portion of vein between the two ligatures was either excised or allowed to come away later.

Ambroise Parè, too, although unfamiliar at the time with the circulation of the blood, operated in somewhat the same manner on such cases, and Everard Home ligated the internal saphenous in twelve cases for varicosities complicated by leg ulcers, while Sir Astley Cooper discarded it as too dangerous, an objection which at the present time does not obtain.

Twice during this long period was the operation forgotten: once coincident with the discovery of the circulation of the blood, and once because of the danger accompanying it in preantiseptic days. But it was not to be lost forever, for in 1890 Trendelenburg published an article on the subject and again placed it on the list of useful operations.

He, after a series of interesting experiments, proved conclusively to himself that varicose veins were not due so much to the pressure of blood exercised upon them by the onward circulation as to the weight of the column of blood in the femoral and iliac veins and vena cava inferior; this, together with the associated incompetency of the valves, he considered as responsible for the condition. He, therefore, ligated the internal saphenous with the idea of supporting this column of blood and thus affecting a cure.

In speaking of the results thus obtained, he says: "If at the time of the operation there be present an ulcus cruris, it heals much more rapidly than by any other treatment; the veins when the patient is standing do not entirely disappear, but remain much smaller than they were before the operation, and the tendency to the further development of ulcers is almost entirely removed."

In the service of Dr. J. B. Bogart at the County Hospital

during the past summer, the writer, together with members of the house staff, although at the time unfamiliar with the technic of the operation as done by Trendelenburg, ligated the internal saphenous in a series of twenty-one unselected cases. Our technic, as I have since learned, differed from that of the originator in a few points.

The operation as described by him is as follows, *viz.:* Through an incision in the skin three cm. long the vein is exposed and isolated with the handle of a scalpel; an aneurism needle is then passed beneath it and the limb elevated in order to allow the blood to flow out; the ligatures are then tied, the vein divided, and the wound closed. He also adds that the operation is not so painful as to make the use of an anesthetic necessary.

He choses as the most desirable for ligation a point at the junction of the lower and middle thirds of the thigh, where the vein is most superficial, and invariably divided between the ligatures, a precaution which we omitted in a few of our cases and one which he considers as highly important. He also found it necessary to ligate the short saphenous, as well as some of the large branches of the saphena magna, in some cases, in order to effect a cure.

We employed an oblique rather than a longitudinal incision, situated about one and a half inches below the point where the vein enters the femoral, the idea of an oblique incision being in order to obtain freer access to the structure, and although it is contrary to the rules of normal incision, as laid down by Kocher, we found no evil results following it. The wounds were closed in every case with a subcuticular silk suture, and without exception healed *per primam.* There was, however, slight induration in one or two cases in which we used the solution of Schleich for anesthesia.

The patients were kept in bed, as a rule, for one week after the operation, or until the sutures were removed, when they were allowed up and the usual treatment continued.

Most of the patients were past middle age, the youngest being thirty-five years old. Two of them gave a distinct specific history and a few others a more or less indefinite one. Many of them were long-standing cases, the longest being eighteen years, which does not mean, however, that during that time the ulcer had never healed; on the contrary, a temporary cure had been obtained in most of the cases several times.

Cocain was the anesthetic of choice in nearly all cases; first,

because it was eminently satisfactory, and second, because the patients were not, as a rule, favorable ones for general anesthesia on account of chronic alcoholism, advanced kidney lesions, or both. No evil results followed the use of a four-per-cent. solution, which, in our hands, acted better than the solution of Schleich.

In one or two instances some difficulty was experienced in finding the vein, which was soon overcome, however, by the application of a bandage above the point selected for ligature, a time-honored procedure and one suggested to the members of the house-staff by the temporary embarrassment of the writer upon one or two occasions.

Of the total number of cases operated upon, all but one were noticeably improved, and sixteen were discharged cured. These results are, to say the least, encouraging, when we remember that most of the cases were ones which had been in the hospital for a long time and upon which many different kinds of treatment had been tried. In the majority of them considerable improvement had been made; others had positively failed to improve with any treatment, of which class the following is an example: A man forty-six years of age was admitted on April 2d, with an ulcer of four-years' duration, involving an area over the anterior surface of the left leg about three and a half inches in diameter; the veins were markedly varicose. In his case many things had been tried, among which may be mentioned iodoform, ichthyol ointment (in varying strengths), Thiersch solution, mercurial ointment, scarification, strapping, and rest in bed in combination with the above, all to no purpose. On August 4th the vein was ligated and the ulcer strapped, a decided improvement was noticed from the first, and the patient was discharged cured on October 3d. He has since returned for treatment for rheumatism and the leg remains in good condition.

It frequently happened that although there was a decided improvement in the appearance of the ulcer after operation, that recovery was considerably delayed, as in the above case. These were cases, however, in which either the ulcer covered a very large area or a specific history was obtained, and to the latter cause I attributed largely the failure in the cases which were not cured.

Concerning the condition of these patients at the present time I regret to say that I am only able to report the condition of three beside the one above mentioned. In response to a circular

addressed to them I received one reply by mail in which the patient states that her ulcer remains healed, but that she still suffers considerable pain. The second case was one which had been under my care for three months before operation and in which I had succeeded in curing the ulcer several times, only to have it recur, as a rule, in about ten days or two weeks. He was operated upon on September 29th and discharged cured on October 18th. When seen less than ten days ago the leg was in perfect condition and he stated that he had had no trouble from it.

The third and last case was one which returned to the hospital with a recurrence after a period of about one month.

As before stated, although the ulcer may take on a healthy appearance after operation, there still remains a large area to be covered by epithelium. In such cases it seems to me the value of skin-grafting cannot be overestimated. We employed it in but a few cases of necessity, as the patients were not, as a rule, good ones for anesthesia. In the few cases in which it was done the results were, with but one exception, satisfactory, and in that case I am confident that the failure was due to infection received at the time of operation rather than to the character of the surface grafted. That it is absolutely necessary to wait until a healthy granulating surface has been secured before operating I am satisfied is not necessary.

The methods adopted in our cases were as follows, *viz.:* The limb for three days before the date fixed for operation was enveloped in a copious dressing and kept wet with Thiersch solution, which, upon removal, left a comparatively clean, though not always granulating surface; the entire area was then curetted, frequently down to the underlying fascia, and all traces of the previous granulations removed; the edges were then pared off level with the surrounding skin and the wound irrigated with hot saline solution to arrest hemorrhage, and for cleansing purposes; the grafts were then applied to this surface. The dressing consisted of sterilized rubber tissue cut in narrow strips and applied after the manner of a basket strapping; a sterilized compress, cotton, and a bandage were then applied, and over all a plaster cast extending well up the thigh in order to secure perfect immobilization. This dressing was not removed for one week, during which time the patients were kept in bed.

The following may be cited as a case treated in this manner: A girl about twenty-one years of age came under our care with an ulcer about two inches in diameter situated just above the ex-

ternal malleolus; the surrounding skin was apparently healthy and there were no varicose veins. No specific history could be obtained. The ulcer presented sharply defined edges and was somewhat excavated, the cavity being filled with fungous granulations. Various methods were tried, including scarification, curetting, strapping, and local applications too numerous to mention. It positively refused to heal, however, or to show any tendency to do so. After a preparation, as described above, the ulcer was curetted down to the fascia, the edges pared off, and grafts applied to the new surface. One week later the dressings were removed and the area found to be almost completely covered with new skin. A later attempt to cover in the small area failed on account of infection, but under diachylon strapping the wound rapidly healed, and when seen about eight months later was found to be in good condition.

It is interesting to note in this same case that the patient had a similar condition on the end of the great toe of the opposite side. It was about the size of the end of a lead-pencil, and failed to heal even after excision.

In conclusion it may be said that while twenty-one cases of varicose ulcer treated with ligation of the internal saphenous are not sufficient to warrant one in drawing definite conclusions, I think that the operation may be considered as one of value in the treatment of these cases, and that at least an improvement may be expected in most of them; but that every case will be cured even temporarily is, I think, doubtful.

The point for ligation is one to be considered. I should expect the best results from an operation done just at the lower portion of Scarpa's triangle, where the vein enters the femoral, on account of the danger of collateral circulation being established if a ligature were applied lower down.

In the few cases that I have seen after operation the diminution in the size of the veins has not been striking.

The operation certainly has some advantage over the more radical measures, such as excision and multiple ligation, which commend it in certain cases. Neither of these can be done without the use of a general anesthetic, a question to be seriously considered in many patients, and if the same amount of relief may be obtained from a simple ligation under cocain, certainly this is the operation to be used.

I think the immediate results obtained in our cases have been sufficiently good to justify one in a further trial, and I shall

await with interest for reports of these and other cases one year hence.

DISCUSSION.

Dr. W. C. Wood said that there were two or three points that had especially interested him. As will be noted, some of these cases were cured and some were not. He thought it possible before operation, following out the reasoning of Trendelenburg, to determine what cases will be benefited. If we examine cases in this manner, described by Trendelenburg, by placing the patient on the table and elevating the leg, and then applying the pressure over the point where the ligation is to be, in some cases the leg will quickly refill with blood in spite of the pressure over the vein. In those cases it is useless to operate. However, the majority of cases will act in the way laid down in the paper; and those cases will be benefited. He had followed out that process in practice, and had no reason to regret it. Among the palliative measures he had used what is known as the Brenner stockinet bandage, brought to this country by Dr. Brenner. It is now obtainable in this city. It is simply like the sleeve of a summer undershirt, and gives a steady pressure without heat and permits ventilation through the material better than the ordinary rubber bandage.

Dr. A. T. Bristow said that he would like to make a short comment on the method of skin-grafting. The method described is the usual one, and yet he believes it to be faulty. He does not believe that rubber-tissue or oiled-silk protective is the best covering for grafts because they prevent the exhalations of the skin from escaping and practically poultice the grafts.

The dressing which his colleague, Dr. Delatour, uses is one that is very successful. It is powdered iodoform and dry gauze. The dressing which the speaker likes still better is the dressing by silver foil. He has been in the habit for a year and a half of using that dressing, and has been very much gratified by the results. It is infinitely more cleanly and better, in his judgment, than rubber tissue; and in most cases the grafts hardly lose their original appearance, preserving their epithelium unchanged—something he has never seen in the other methods.

Dr. T. B. Spence said that some years ago when the Thiersch method of skin-graft was comparatively new, as a student he had the pleasure of seeing Dr. McBurney trying skin-grafting. He followed the method of wet dressings, with a silk protective dressing applied as Dr. Bogart has mentioned, and the speaker

had never seen so perfect a series of skin-grafts as those secured by Dr. McBurney. He had seen the dry iodoform dressing used on a number of cases and he was sure they did not compare with that series of cases. In all the skin-grafting which he had done he had followed that method; and he had been better pleased with that method than with the dry dressing without any protection between the gauze and the skin-grafts. Certainly we cannot, any of us, expect to have a more perfect set of cases than McBurney exhibited.

As to ligation of the internal saphenous vein; he had seen a case operated upon by a member of this Society one and one-half years ago—a lady of sixty, who had a large ulcer of the leg, which healed, and about a month or two after she went back to the hospital with the ulcer broken down again, and stayed there until there was complete healing. There had been complete healing until a month ago, when it again broke down. She now has a large ulcer, which is responding to strapping. She says her veins are very much smaller, however, than they were before the operation, and the healing seems to be going on more rapidly than in the ordinary ulcer under strapping.

Dr. L. S. Pilcher said that varicose ulcers we have with us always, and any suggestion which is of a practical character and which comes within the limits of what might be called minor surgery, that would promise advantage in their care, certainly must be accepted as of very great importance. He welcomed particularly this contribution from among such an accumulation of old and inveterate cases as the Kings County hospital has for many years had, and from which, until now, the profession has had no report. The results which have been reported are certainly extremely promising and encouraging. The question which has been made as to the permanence of the cure is one, however, which is of very great importance. In a certain proportion of cases, doubtless, if only a temporary relief from pressure of the blood-column can be afforded, the tendency of the tissues to contract may be expected to bring about the permanent diminution of the dilated state which formerly existed, and with but slight trouble in the way of external support, a permanent relief might be expected. It seemed to him not irrational, therefore, to look for a permanent relief in some cases from even so slight a procedure as a single operation of double ligation of the internal saphenous vein. On the other hand, in a much larger proportion of cases it is probable that ultimately such restoration

of venous anastomosis should take place as to bring about as free a communication between the great venous channels above and the veins of the leg below, as at first, and with that again the same condition of affairs as regards the malnutrition of the leg would arise as existed before the operation. Realizing this, it has seemed to him that the multiple ligations which have been referred to, which were especially brought to the attention of surgeons a number of years ago by Dr. Chas. Phelps of New York, were more likely to secure the permanent relief, were more in accord with the exact indications, with the anatomical conditions of varicose ulcer, than a ligature so restricted as that which the reader of the paper this evening had described.

He recalled in this connection the experience of a professional gentleman of eminence, with whom he had some relations in the early part of his professional life, at least thirty years ago, who had been subjected then to ligature of the internal saphenous vein for varicose condition lower down. The operation had been done in Germany; some years afterward when he was relating his experience he was forced to say that no permanent advantage had been derived by him from the ligature to which he had been subjected years before. Perhaps, prejudiced by this early experience known to him and also by the anatomical reasons just stated, as to the readiness with which venous anastomosis was reestablished, he had himself not been willing in any of the cases presented to him to limit himself to single ligation of the saphenous vein but had always used multiple ligations.

Of course there are a great many people who suffer from varicose ulcers, who will not take care of themselves, whose condition is due to their own neglect. There are others who will take care of themselves if taught how, and for such the palliative effect of a bandage, such as a good flannel bandage, available to everybody, may be depended on to secure a permanent relief as long as it is used, in even extensive and inveterate cases of ulcers, due to varicose conditions of the veins.

Dr. Figueira: In regard to the treatment of varicose ulcers in the practice of several surgeons I have seen grafts do well and take well, under the treatment that the doctor condemns: the covering of the grafts with rubber tissue. I have done it several times with complete success and in the literature of the subject a number of successful cases are reported. And this way of dressing skin-grafts is recommended in books by prominent surgeons, so I do not think it is fair to condemn it in a general way.

In regard to treating varicose ulcers by ligation of veins, there is a treatment by an American surgeon which is as good as, if not superior to, the treatment of the German surgeons. I have reference to Dr. Phelps of New York. The ligation of the veins is done by subcutaneous ligature. He advises ligation of the vein two inches apart by passing a needle behind and out under the vein; then passing the needle in front between the vein and the skin, withdrawing the ligature, and doing it repeatedly, so as to close all the affected veins. It seems to me that the obliteration of the veins in the immediate neighborhood of the ulcer offers a better chance and is more philosophical than the ligation of the great saphena vein. I have seen this method used once and I have seen the report of several cases, and certainly they have been very sucessful.

Dr. J. P. Warbasse said that the discussion seemed to involve the question of skin-graft as well as the question of ligation of the internal saphenous vein in the treatment of ulcers of the leg. With regard to the covering of the grafts by a non-absorbent material, he wished to express his judgment, as the result of experience and observation of this class of cases, that we do secure better results by the use of an absorbent covering for skin-grafts than by the use of a non-absorbent material such as rubber protective. He had, in his own experience, become quite convinced of this. We used to see in the method of Thiersch the rubber protective applied in strips, evidently for the purpose of allowing the serous discharges to escape through the interstices of these strips. And when the first dressing has been made we all of us have seen that these strips adhere closely together, and the result is practically the same thing as though one solid piece of protective had been applied. This causes tension of the serous discharges and an actual poulticing of the new epithelial grafts. The serum accumulates underneath this protection. Usually there is considerable discharge, so much as to cause a maceration of the newly implanted epithelium. The best results which the speaker had seen in a skin grafting had been secured by conducting the operation as dry as possible; that is, when the grafts were placed on a thoroughly dry surface in which perfect hemostasis had been secured. When the Thiersch method was first applied, it was the practice to float these grafts out and apply them wet to the surface. The speaker believed that we secure better results when the grafts are applied dry. He practises covering the grafts with a copious application of stearate of zinc and subiodid of bis-

muth, which he thinks is less objectionable than iodoform, and over this a dry, evenly applied gauze compress with moderate pressure. In his hands this has given eminently satisfactory results. The last case he did in this manner was a case in which we would scarcely hope for complete retention of the grafts, inasmuch as the graft was planted on a tendon which had been exposed; but even this, under the dry treatment, adhered. As to the ligation of the internal saphenous vein, theoretically he could hardly conceive how a ligation of this vein would cure an ulcer of the outer side of the leg, above the external malleolus, the blood from which is returned through the external saphenous vein; and it seemed to him that in such case a ligation of the external saphenous would be indicated.

Dr. A. H. Bogart said that there is a certain number of cases of leg ulcer in which nothing short of an operation on the veins seems to be of any value, but, as a rule, the cases are those in which the administration of a general anesthetic is contraindicated for various reasons. He doubts the advisability, or possibility, of doing the operations of excision or multiple ligations on these cases without the use of a general anesthetic. On the other hand the consent of the patient can be more readily obtained for the simple ligation and this can be done without the slightest danger, therefore it seemed to him that it is the operation indicated in such cases. He does not maintain that it is a "cure all," still the results have been sufficiently good to warrant it in any case, and he doubts whether the chances of recurrence are any greater after a ligation high up, with division of the vein, than after excision of two or three inches lower down, where the anastomosis is more free.

He believes that if the operation of skin-grafting is carefully done with strict aseptic precautions and the wound left for a sufficient time for the grafts to take hold, the results will be satisfactory. Undoubtedly the rubber tissue does dam up the secretions to a certain extent; the same may be said, however, of silver foil. It has been our experience that in cases of skin-grafting which do well there is very little discharge.

MAJOR HENRY WALLACE, M.D.

Dr. Henry Wallace has resigned his commission as Surgeon of the 47th Regiment and resumed his practice.

PROCEEDINGS OF SOCIETIES.

THE BROOKLYN PATHOLOGICAL SOCIETY.
THE 395TH REGULAR MEETING.

April 14, 1898.

Concluded from page 583.

CARCINOMA OF THE RECTUM.

Dr. C. H. Goodrich presented the specimen.

This is a specimen removed from an aged lady, and is interesting for several reasons. In the first place, the location of the tumor in the upper third of the rectum and involving the lower part of the sigmoid flexure is not as common as the anal-carcinoma or the suprasphincteric carcinoma that is situated entirely beneath the pelvic peritoneum. In the second place, this tumor caused complete obstruction so that this woman's bowels did not move for three weeks before a colostomy was done. The colostomy was succeeded after three more weeks by the operation which resulted in the extirpation of this tumor. In the third place, there was a remarkably intimate relation between the rectum, the left ovary and tube, and the posterior uterine wall—so intimate that it was almost impossible to sever the relations, and in attempting to do so the fourth point of interest became evident, and that was the fragility of the tumor, being the softer variety of carcinoma, involving the anterior rectal wall, and as the manipulations were carried on, the bowel was entered and it was found that the tumor involved much more of the bowel than had been evident at first. The fifth point of interest lies in the fact that the tumor and considerable bowel were removed through the abdominal incision, whereas in some instances the same sort of tumor has been removed by partial sacral resection, and I think at the present time that operation is recommended most highly, probably by most of the surgeons. In this case the real work of intestinal resection was carried on with remarkable facility and occupied a very short time, and as an observer at the case it occurred to me that that should be the route through which tumors so located should be attacked.

In thinking of this case I recall an article by Edward H.

Taylor of Dublin which appeared in the *Annals of Surgery*, in the April number, I believe, which gave me at the time I read it the clearest ideas upon carcinoma of the rectum, the anatomical and principal features, that I have ever read.

The operation in this case was very much facilitated by the use of the Murphy button. The case was one of Dr. Delatour's, by whose courtesy I was able to present it.

DISCUSSION.

Dr. W. C. Wood: Possibly in this connection it may be worth while to call attention to the fact that a certain number of cases of carcinoma have been reported in young people in recent years. In fact I removed a tumor something less than a year ago from a young boy of nineteen—a well-marked carcinoma, both clinically and microscopically. A paper has been written to that effect recently, the name of the author of which has slipped my mind, but I think the fact that these cases of carcinoma occasionally occur in young people is something not usually appreciated.

Dr. Delatour: In direct line with Dr. Wood's remarks, I look upon the distinction of carcinoma in the aged and sarcoma in the young as not true, to the extent taught in the past. I think I have seen sarcoma frequently in people past forty or forty-five, and very frequently in comparison I have seen carcinoma in younger people.

Dr. Goodrich: Substantiating the remarks of Drs. Wood and Delatour, I would mention a case of carcinoma of the tongue which I observed in a man of twenty-three, in which the carcinomatous growth was typical, and was examined by a number of noted pathologists and considered at that time remarkable. That was about three years ago.

Dr. J. P. Warbasse, in the chair: Dr. Wood's observation is well made, for it seems that there is no part of the body in which carcinoma is found in young subjects so frequently as in the rectum. The historic statement that carcinoma is a disease of advanced years is very true, but the rectum seems to be an exception to this rule. For example, we have no historic record of carcinoma of the lip—the common epithelioma of the lip—developing in the young. I know of no case in history; but we have records of cases of carcinoma of the rectum developing in very young persons. In all of these carcinomata of the rectum in the young we find the disease beginning in the epithelium as a papillomatous degenerations; and even when the disease has advanced

far enough to present the clinical signs of carcinoma still the microscopic examination of the tumor shows that there are parts of the growth in which the distinctly benign papillo-adenomatous feature is present; whereas, in the more elderly subjects we very often fail to find this benign element at all.

RESECTION OF INTESTINE FOR STRANGULATED UMBILICAL HERNIA.

Dr. Russell Fowler presented the specimen.

This is a specimen from a case in which I resected a portion of the small intestine for a strangulated umbilical hernia with a successful result, done a week ago Sunday. I thought it might interest the members to see the condition of the button. It came away day before yesterday, which was the ninth day, and if we can get it apart readily, perhaps we can see the edge of the intestines grasped by the button.

The history of the case was not unusual—the ordinary history of vomiting and acute onset with hardly any rise in temperature, and the strangulated intestine was not situated through the umbilicus, but right alongside of it, as is usual in these cases of acquired hernia.

DISCUSSION.

Dr. Warbasse: There should be some discussion on this case, for it is of interest because it recovered. The mortality in strangulated umbilical hernia is exceedingly high, as we know, and Dr. Fowler reports this case in an off-hand way, as though it were an every-day occurrence with him to have these cases recover. We congratulate him on this brilliant result.

Dr. Delatour: I think the trouble in strangulated umbilical hernia is first, that we have the strangulation occurring high up in the intestine, with early appearance of fecal vomiting; second, that we have umbilical hernia occurring most frequently in people who are immensely fat, and in addition to having fat in the abdomen they have fatty degeneration of the heart. Those two points I think enter very materially into the prognosis of the cases—the fecal vomiting occurring early; the retrostalsis pours fecal matter into the stomach when the patient is under the anesthetic and vomiting occurs; the fecal matter gets into the pharynx, and very frequently portions are inhaled, and may set up either an acute edema of the lungs or be followed by septic pneumonia. I have seen that in a number of cases. In one case upon which it was my fortune to operate, the patient died about ten days or two weeks after operation from the heart conditions solely. The

abdominal condition was perfect; the wound had healed by primary union, and the patient died simply from the weakened heart condition. I think the heart was influenced by the anesthetic, and it was the result of the action of the anesthetic on the fatty heart that caused death in that case. Three times before she finally died, within a week at intervals of from 24 to 48 hours, she became absolutely blue from head to foot and it did not seem possible she could ever recover from the condition, although she did; I have forgotten just what attack she died in but it was after she had had several. I have operated on quite a number of cases of strangulated umbilical hernia and I only recall one case that permanently recovered.

Dr. W. C. Wood: While some of us may have had an occasional case of strangulated umbilical hernia recover, I think very few of us have seen recovery occur when gangrene of the gut, necessitating the use of the Murphy button, also existed. The use of the Murphy button for a chronic condition without gangrene is a fairly successful procedure apparently, but the use of the Murphy button for a gangrenous condition of the gut plus acute symptoms of strangulated umbilical hernia, presents a complication of diseases that seldom ends in anything else but a fatal result. I think the doctor is to be doubly congratulated for using the Murphy button on a gangrenous hernia as well as a strangulated umbilical hernia.

Dr. Russell Fowler: I thank the members and gentlemen for their kind expressions. I want to mention a case operated on by Stewart McGuire of Richmond, in October, 1895. It was a case of strangulated umbilical hernia of forty-eight-hours' standing, with fecal vomiting, etc. He removed fifteen inches of gangrenous ileum. The patient recovered, the Murphy button being recovered on the twentieth day, and the button showed a ring of the intestine at the site where it was placed. My own case had all the contraindications—"fair, fat, and forty," and five inches of fat on the abdomen, etc.

OSTEOSARCOMA OF SUPERIOR MAXILLA.

Dr. Peter Hughes presented the patient.

This patient was operated upon on the 25th of March. He had been a sufferer for about two years with an osteosarcoma of the superior maxilla; he never suffered any pain at all as is usual with this kind of cases, but as the original picture will show [exhibiting photograph], he was quite a sufferer from inconvenience. He made a nice recovery, but I find on the end of the

malar bone I have left something that appears to be a remnant of the new growth; apart from that the boy has done very well. The trouble originated first at the end of one of the molar teeth and traversed upward, and the great trouble seemed to be around the antrum; it was filled with fluid which bulged it so that the hard palate was pushed so far inward that it narrowed the passage and prevented swallowing; the floor of the nose was destroyed entirely, and he suffered also from difficulty of breathing. Four years ago he had an attack of pneumonia. Two years ago last January the boy complained of a toothache, one of the molars on the right side being affected; at the same time he complained of some swelling, and after a few days the tooth fell out. The swelling kept increasing in size until finally he consulted a dentist who made an incision in the tumor; no pus was present at the time; the growth kept gradually growing larger, but he suffered no pain or any inconvenience except what I have mentioned.

DISCUSSION.

Dr. J. D. Sullivan: This case of Dr. Hughes reminds me of a case that came under my observation about three years ago in a maiden lady of about 50 years of age. She had a very prominent swelling, I think on the right side. It commenced probably six months before that in a decayed tooth, in the alveolar process and gradually extended up. It was treated for several months by a physician of good repute out on the Island, and kept on growing, the bone enlarging until it was as large as my fist. She came under my observation and I called Dr. Wood in consultation, and we were under the impression it was osteosarcoma, and it was decided to remove it. I did so with an incision very similar to the one employed by Dr. Hughes, following the edge of the orbit and the side of the nose to the median line. The specimen was sent to a pathologist and he pronounced it alveolar-sarcoma. Whether there is any difference between alveolar-sarcoma and osteosarcoma I am not prepared to say, but I removed the whole of the superior maxilla with the exception of the orbital plate; probably as much if not more than Dr. Hughes removed here. The case healed up, there were no bad symptoms afterward, and has remained well ever since. I saw her two years afterward and she was then sound and well. There was no recurrence; in fact, the recovery was so complete that I have been inclined ever since to doubt the diagnosis. I have

always looked upon osteosarcoma as a disease which inevitably recurred.

In looking at this boy of Dr. Hughes' I am inclined to think the disease is already recurring. I am doubtful whether the boy is cured or not.

Dr. Hughes: There is nothing remarkable about the case to me, or the rest I should judge, except the youth of the boy. Sarcoma appears in other parts of the body at a very early period, but I have yet to see a case as young as he is of osteosarcoma of the superior maxilla. I think I have left part of the disease behind on the malar bone. I do not think that the recurrence has taken place since the operation was performed—I think that would be a little premature. I have had some experience in cases of this kind in adults, and I remember five or six cases where I have had no recurrence up to the present date, and it is now three years, two years, and one year from the time I operated. One particular case I can recall of a lady who lived in Huntington, L. I., a woman 30 years of age who presented symptoms of osteosarcoma of the superior maxilla on the left side. Microscopic examination had been made at the time, and it was discovered that it was osteosarcoma. I removed it, and the superior maxilla has almost restored itself, or in such a degree that she has got a hard, bony growth on the left side which is hard, secure and firm looking with no appearance at all of a recurrence of the disease. After the operation it was regarded as being a very satisfactory one on account of the way it healed, etc., and the recovery of the patient. It was a very bloody operation at the time; she was a very large-faced woman, plethoric, and she bled quite freely.

Dr. Sullivan: I had been under the impression that osteosarcoma will impart its malignancy to the adjacent soft tissues, and when I speak of the recurrence in this case it would look to me that the signs of recurrence now are in the soft tissues. Can Dr. Moser enlighten us on that subject—whether it will impart its malignancy to the soft tissues and if the soft tissues will become implicated and progress as in the bony structures?

Dr. Wm. Moser: They may. True osteosarcoma is very apt to recur, if not in the immediate region where the extirpation took place, it will—as in the case Dr. Wood mentioned this evening—recur in some remote organ.

DOUBLE PYOSALPINX WITH CYSTIC OVARIES.

Dr. Peter Hughes presented the specimen.

There are no particular peculiarities about these specimens. They serve to indicate the mistakes we are liable to make.

The patient from whom this uterus and appendages were removed was 20 years old, a nullipara. She has had all the pain that any person could have in her abdominal cavity for some time; has had profuse ovarian hemorrhages which weakened her down a great deal and she could not bear the intense pain, that was greatest upon the left side. She came under my observation about a month ago, and I think that I stole the case from some person in Richmond—Dr. Buckmaster. I think he examined this lady, and Aunt Hannah and Aunt Hattie wanted to bring down Dr. Buckmaster to operate on her and I wish he had; but the case is doing well now. I was frightened when I removed this uterus at what I found, but I might now state I removed it on account of the pathological conditions existing there. I made a diagnosis of fibroma of the uterus, and I was so positive that it was fibroma that I explained to the rest of my colleagues how easy it was to make a diagnosis of that character, and after due consultation with the lady she proposed to have the uterus removed. I removed it, and instead of finding a fibroma I found two large pus-tubes and a cystic ovary on the left side. She is doing very well now, has no temperature or anything at all present, and I expect she will make a nice recovery minus her uterus. But I think it would have been rather a serious thing if I had removed this uterus and not found these pathological conditions existing. It was removed by the vaginal route.

CASE OF CERVICAL ABSCESS.

Dr. H. A. Alderton: I was called in consultation with Dr. Schelling on last Monday afternoon to see a man who had been ill for a number of weeks. He was evidently suffering from sepsis, and his neck on the left side was swollen from the region of the ear down to within half an inch of the clavicle. This swelling lifted the sternocleidomastoid muscle, involving the region of the great vessels.

The history that I got was that he had been ill for a number of weeks; that he had had earache at the beginning, not lately; had had more or less headache, not a great deal, and had no discharge from the ear whatever until two days before I saw him. Then the pus began to well out of the ear very profusely—very

thick pus. The mastoid was not affected, it was not swollen, and there was no redness over it. It reminded me at that time, and does now, of the pertinency of the remark of Dr. Glentworth R. Butler, that in the majority of cases he was only able to make a diagnosis of suppuration of the ear by the fact that a discharge took place from the canal. In this case it had been impossible to make a diagnosis upon such ground. I immediately sent the man to the hospital—he was a very ill man—and that same evening at seven o'clock I operated upon him. I expected to find a classic Bezold's mastoiditis, with gravitation abscess and perforation of the inner wall of the apex. The mastoid was very hard and compact; there were no cells, and there was no perforation of the inner wall of the mastoid whatever. I entered the mastroid antrum and found that it was much enlarged. No pus came from it, however, but there was very profuse venous hemorrhage, due probably to the granulations. I curetted these out and the hemorrhage diminished. I had observed at the time of my first examination that there was a certain amount of granulation tissue near the orifice of the canal, and that when I pressed on the swelling in the neck the pus welled up at the site of these granulations. I then probed, at the time of the first examination, thinking I would find a sinus leading into the mastoid. I was not able to find it and gave it up, thinking that my inability or lack of skill did not permit me to pass the sound through into the mastoid cells and that they were probably necrotic. After I found the mastoid was healthy, I changed my opinion and passed the probe in down along the neck and sheaths of the vessels until I could feel it come toward the surface, I should judge about an inch and a half or two inches below the angle of the jaw.

The inner canal walls did not seem to be swollen; there seemed to be no pus-tract along them. Where did this pus come from? We know there are certain openings normally existing from the tympanic cavity—the Eustachian tube and the aditus ad antrum. It evidently had not gone into the antrum, otherwise the pus would have welled out freely from the antrum when that was entered; it had evidently not gone along the tendon of the tensor tympani, or we should have had a retro-pharyngeal abscess; it had not, I think, gone along the carotid canal, though sometimes the carotid comes pretty close to the tympanum; it had not, I think, penetrated into the labyrinth, because there were no labyrinthin symptoms, such as dizziness, etc. Now, the

only thing that to me seems reasonable is that there must have been a dehiscence or a lack of bony development between the bulb of the jugular and the tympanic cavity. The pus simply passed through that. From the history, I should judge the drum was not broken until recently, and the pus had simply gone through this dehiscence and passed down into the neck and gradually formed a tremendous abscess there along the sheaths of the vessels, and the man had gradually gone on suffering from this collection of pus, without any marked swelling, until limitation in some way had formed with some tension. He was an ill man. In getting to the antrum, as so often happens in these compact mastoids without cellular tissue, the boundaries are very narrow. The facial canal comes up and the lateral sinus comes outward and you have to fight pretty shy of them in order to reach the antrum without touching them. In this case a little facial paralysis resulted, which I think, however, will pass off. I incised, as I said, the abscess, and passed the probe upward and found it would come out just at the edge of the bony external canal, where the granulations existed, and the sinus there was just at the edge where the bony and cartilaginous canals meet. So, evidently, the pus had simply pouted and perforated there, because it was the point of least resistance, and the probe on entering extended a distance I should think of fully seven or eight inches in its curved course from its lower opening to the external canal.

This case is important because it shows you may have cases in which an abscess is due to tympanic inflammation, which gives absolutely no external symptoms until the pus manifests itself in some other region.

I should have stated that at the time of operation a perforation existed in the drum membrane, and that water syringed into the mastoid wound came out through the external auditory canal.

HENRY P. DE FOREST, Secretary.

THE BROOKLYN SURGICAL SOCIETY.

Regular Meeting, April 7, 1898.

The President, Dr. H. B. Delatour, in the Chair.

POTT'S DISEASE OF THE SPINE, COMPLICATED BY PSOAS ABSCESS, CURED BY RECUMBENCY AND ASPIRATIONS.

Dr. B. B. Mosher presented a patient who had been seen by the Society a year and a half ago as a cured case then, and as some of the members of the Society were skeptical because he had a few months before that aspirated a psoas abscess the case was again presented. There had been no recurrence of the abscess. The case had been treated in recumbency for practically two years; and she had worn a brace for a year and a half. When he first saw her she had been through the usual routine of plaster jackets and braces and was so she could not stand up. The abscess occurred on the left side; and she has now a perfect restoration of function of the thigh. It would be a hard matter to find that she ever had a psoas abscess. When she first came under the reporter's treatment and was put to bed, she began to improve. She was in bed and crawling on her hands and knees for two years. There were five scars where the abscess had been treated externally, but they have all healed.

SEPARATION OF THE UPPER EPIPHYSIS OF THE HUMERUS.

Dr. B. B. Mosher presented a child who had fallen down stairs and sustained a separation of the upper epiphysis. No crepitus could be felt, but the fluoroscopic examination showed a separation at the epiphysis.

Dr. A. T. Bristow said that after examining the case with some care he was under the impression that it was in all probability a case of fracture with dislocation. He saw such a case two nights ago, and in which he was fortunate enough to recognize the fact, and also to get the head of the humerus back into the cavity.

Dr. B. B. Mosher said that he had had the opportunity of watching the motions of the bone under the fluoroscope, and it seemed rather plainer then that the head did not come into position. The epiphysis is separated and the bone rides up, shortening the length of the same.

DEFORMITY CAUSED BY FRACTURE OF THE SCAPULA.

Dr. W. B. Brinsmade presented a case of deformity caused by injury to the scapula. The patient was a brakeman. On the 26th of December he fell on his back and soon after noticed the deformity which could easily be seen. The posterior border of the scapula is thrown backward, and he was disabled to a considerable extent, but now has got back the use of his muscles and has a good restoration of function. His greatest pain was directly in the center of the bone, and there now seems to be a slight depression there.

PRESENTATION OF A CASE OF HIP-JOINT DISEASE WITH ABSCESS, TREATED BY ASPIRATION.

Dr. A. T. Bristow said that this was a case of conservative surgery which he should like to show the Society, in the person of a boy who passed over into his service last spring with a disease of the hip-joint and a large abscess. The case was referred to him for the purpose of exsection; but before exsecting he determined to see what conservative measures would do. Accordingly he aspirated the joint and took out six or eight ounces of thick pus, and then injected a ten-per-cent. solution of iodoform and glycerin. At the end of a little more than two weeks he aspirated again, and drew out, not pus, but slightly cloudy fluid interspersed with iodoform. Three weeks afterward he aspirated again and drew out a clear fluid; and again injected the same quantity of iodoform and glycerin. The boy had a protector-splint when he came into the hospital and he has since had a new one made to accommodate the boy's growth. This is a very excellent example of what conservative surgery can do in hip disease, where apparently an open operation is indicated. The speaker thought his treatment was exactly in line with the method of Dr. Mosher, in treating the psoas disease without laying it open. Whenever we lay open these tubercular abscesses we replace a single infection with a multiple infection, and one of the chief sources of trouble is the fact that we do not avoid multiple infection. Now, if we can remove the possibility by aspiration, and then introduce iodoform in a safe manner, as he believes this solution of iodoform and glycerin is, he thinks it is a wise plan. The little operation on this boy was done without any anesthetic at all, and after the first month he was allowed to go around with a splint, and was aspirated but three times.

Dr. Bristow was very much interested in investigating the

character of the change in the fluid, as he has described it—the first time pus, the second time seropurulent fluid, and the next time a clear fluid. He goes around now in good health as far as can be seen. It is the intention to have him retain the protective splint for another year. The speaker wished simply to add this case to the testimony of others in favor of the conservative treatment of tubercular cases of this character where it is possible. This boy was first hurt in February, 1896, and it was in June, 1897, that Dr. Bristow first aspirated him. There is now very little limitation of motion.

Dr. J. B. Bogart said that his experience with the injection of iodoform after aspiration for tubercular abscesses has not been entirely satisfactory. Not that he had seen any great harm done, but it had not seemed to him that a great deal of good had resulted. He had obtained just as good results where a simple aspiration had been done. It must not be lost sight of that the condition of the patient, and the character of the disease have a great deal to do with the case. If one is dealing with an abscess which is stationary, so to speak, a condition of the disease in which no progress is being made, if the abscess is simply aspirated, the probability will be that it will not return. But if the disease is a progressing one the pus will reaccumulate very rapidly. The speaker's experience had been that in a number of cases he had had finally to make either a free incision or the abscess had ruptured spontaneously.

And along in the same line he wished to say that he had never had any reason to regret having made the incision in tubercular abscess. He had incised a number of abscesses about the hip and in the lumbar region, and always with good results, except in those cases in which the patient was in a desperate condition. In some the operation was done to see if possibly a free incision would not improve the condition of a patient who was already dying. The speaker recalled two cases in which there were other tuberculous processes in which no good resulted from free incision; but he felt satisfied, too, that no harm resulted from it. He could not remember any other cases in which the patients did not do well. His custom has been to make a very free incision, and not to do any curetting so as to open up any large areas, and as far as possible to pack the entire abscess cavity, certainly for the first dressing. He believed that with that treatment one is less likely to have an infection follow than if a drainage-tube is inserted.

Dr. B. B. Mosher said that he had nothing to say in closing the discussion except to second what Dr. Bogart had said about the treatment of these abscesses. He had been carrying out a treatment very similar to that, though in some cases he had first tried the aspiration; and when that had failed he had resorted to the opening of the abscess and packing it, and never curetting any more than what could be done with a sponge. His experience with the iodoform emulsions had been about the same as Dr. Bogart had stated his to have been.

GANGRENE OF LEG.

Dr. Geo. G. Hopkins reported a case as follows: Mrs. C., aged sixty-three years; widow. Has always enjoyed good health. For the past year has suffered from cold feet with at times tingling sensation in them. The 15th of August, 1897, an ulcer showed itself on the outer side of the right foot. This ulcer healed in about two weeks. In September her right foot began to be "uncomfortable"; in a few days she began to have stinging sensations in her toes, with coldness in the foot. A small black spot was noticed on the third toe of right foot as large as a pea. From this there developed a dark line which broadened out including the greater part of the flesh on the side of the toe. The fourth week in September a swelling appeared at the base of all the toes, the tissues assuming a dusky red appearance, gradually involving the greater part of the dorsum of the foot.

Blebs showed themselves on various parts of the foot, and all the tissues were soon honeycombed, and the entire foot was gangrenous on the 17th of October when seen for the first time by the reporter.

Emaciation had been very rapid; in two months she was reduced from 250 lbs. to 175 lbs. Her temperature had varied from normal to 102° F., and at the time of the speaker's first consultation with Drs. Heyler and Gordon her condition was so depressed that an amputation did not commend itself as offering a sure hope of recovery. There was a small amount of sugar in the urine.

On the 18th of October amputation of the limb at the middle of thigh was done under the most thorough antisepsis, and the patient rallied promptly after the operation and made a satisfactory convalescence.

The major part of the wound healed by primary union, but there was a slight purulent discharge from the outer angle of the wound, persisting for two weeks.

The patient is now going about on crutches and has gained in flesh and strength; says she feels better than she has in some years.

OPERATING-GLOVES.

Dr. W. B. Brinsmade said that the question of operating-gloves was attracting considerable attention in the surgical world and he wished to exhibit the gloves which were being used at St. John's Hospital. He said that at first cotton gloves were used, and while his experience is too short to say anything very definite about them, yet they have been used with great success, and with a certain amount of moral certainty that the nurses and assistants have clean hands. He stated that one feels much more comfortable with these gloves on.

Another style is the seamless rubber glove, pressed rubber, a little cheaper than the more elaborate ones exhibited by him, but not made as well. The ideal glove at present, in his judgment, is the thin rubber glove already referred to. They can be worn for an indefinite length of time. When properly taken care of they will wear a month, operating every day; and when worn they can be repaired. They are very easily sterilized in boiling water in two minutes. Dr. Brinsmade experimented with these gloves and found that they could be easily and satisfactorily sterilized after being dipped in the pus of an abscess. He has received the following pathological report based upon bacteriological tests made by Dr. Archibald Murray:

The following experiments were made in order to determine the length of time necessary to sterilize rubber operating-gloves by means of Shering's Formalin Sterilizer:

Two kinds of culture media were used:

1. Löffler's medium: Blood-serum and sugar beef-tea.
2. Agar.

In experiment No. 1 a rubber finger, previously sterilized by boiling, was smeared with pus and blood from an infected wound of the hand. Two pieces were immediately cut out with sterilized scissors and forceps and one piece placed in a tube containing Löffler's medium, and one in a tube containing agar. The rubber was then placed in the sterilizer. Two five-grain paraform pastilles were placed in the cup and the lamp lighted.

In six and one-half minutes the light went out and the rubber was allowed to remain in the sterilizer three and one-half minutes longer, making the total length of time in the sterilizer ten minutes.

With sterilized instruments pieces were now cut out of this sterilized rubber and one piece placed in a tube containing Löffler's medium, and one in a tube containing agar. These four tubes were placed in an incubator at 37.5° C. for twenty-four hours and then examined. The tube containing Löffler's medium with the non-sterilized rubber showed a well-marked growth, consisting of light-orange colored colonies.

The agar tube with the non-sterilized rubber showed a well-marked growth consisting of small white colonies which at the end of forty-eight hours had turned to a light orange color.

Mounts from the growths in these two tubes showed a staphylococcus—probably staphylococcus pyogenes aureus. The tube of Löffler's medium and the tube of agar in which was placed the sterilized rubber, showed no growth at the end of twenty-four and seventy-two hours.

Experiment No. 2 was conducted in the same manner as No. 1. Pus from a small abscess over the eye was used.

Two five-grain paraform pastilles were used as in the first experiment. The lamp burned for six minutes and the rubber was allowed to remain in the sterilizer one minute longer, making the total length of time in the sterilizer seven minutes. As in the first experiment, portions of the non-sterilized and sterilized rubber were placed in tubes containing Löffler's medium and agar and these were placed in the incubator at 37.5° C. for twenty-four hours.

Colonies and mounts from the two tubes containing the non-sterilized rubber were identical with those in experiment No. 1.

In the tube containing Löffler's medium and the sterilized rubber there was no surface-growth but the culture medium showed a large number of pittings, but no liquid. A mount made from the center of one of these pits showed a few cocci—evidently those which were put in on the rubber and killed by the sterilization.

This pitting of the culture medium was probably due to evaporation. To determine whether there was any growth in this tube, scrapings from a number of these pits were put into a tube of beef-tea and this was put in the incubator at 37.5° C. for twenty-four hours. No growth appeared. In the agar tube with the sterilized rubber no growth appeared. Both of these tubes, after being examined at the end of twenty-four hours, were put back in the incubator for forty-eight hours more, making a total of seventy-two hours, as in experiment No. 1. The results of these two

experiments show that while rubber gloves covered with ordinary pus-organisms can be sterilized in seven minutes, a stay of ten minutes in the sterilizer would be safer.

Dr. B. B. Mosher observed that if a surgeon goes to the dissecting-room, or to a septic case, and from there to an operation, and feels skeptical about his hands, why should he not wear the gloves in the dissecting-room and in the septic case and keep the hands clean, and then go without gloves in the operating-room?

Dr. W. B. Brinsmade said that Dr. Mosher's idea and his about the cleanliness of the hands are a little different. It has always seemed to him that the major part of infection in clean wounds came from the fingers of the operator and his assistants, and it is in the desire to get the fingers absolutely clean that we want to adopt something of this sort; and perhaps now the best thing in the eyes of the surgical world is the glove. The same precautions in washing the hands are taken here, and in the use of the cotton gloves they have to be changed during the operation, which is an objection to the cotton glove. The object of gloves is not to save the hands, but to insure greater cleanliness.

Dr. Richard W. Westbrook read a paper on "Anesthetic Mixtures in General Anesthesia, with Special Reference to the Schleich Mixture."

Regular Meeting, May 5, 1898.

The President, Dr. H. B. Delatour, in the Chair.

FRACTURES OF THE INFERIOR MAXILLA.

Dr. Burdett O'Connor presented a case of a simple fracture of the lower maxilla caused by a blow on the left side of the face, the fracture being on the opposite side of the jaw. He saw this case at the Dispensary of the Long Island College Hospital, and put him up in an external splint, and he made a rapid and uninterrupted recovery. This case was presented to contrast it with another case which was cured by wiring. The latter case was admitted to Dr. Bristow's service at the Kings County Hospital in the early part of last March. He had been struck a week previously on the right side of the jaw by a hammer. At the time he came into the hospital there was a great deal of induration and swelling over the affected part. There was no irregularity in

the line of the teeth, and with the exception of the history there was nothing in the examination which would show any suspicion of fracture. The reporter made an incision along the lower border of the right jaw for purposes of drainage, and cut down on a fracture of the lower maxilla with the fragments separated from ⅜ to ½ an inch. The intense induration and stiffening of the parts had acted as a splint around the bone, and there was absolute immobility. He wired the jaw with a piece of silver wire of rather large size. The wound was closed up with the exception of a slight space which was left for drainage. The wound healed rapidly, the swelling diminished, and at the expiration of three weeks it was necessary to enlarge the incision to remove the wire. He saw the man three days ago, and there was absolutely no swelling. Perfect union was secured.

The splint which was used for four weeks on the first case is original with Dr. Wight.

Dr. H. B. Delatour presented a kidney, removed by him three days before.

The specimen was removed from a woman forty-two years of age who came into the Norweigan Hospital with the history that about a year ago she noticed a small tumor which had gradually increased in size for nine months, and for three months had rapidly increased in size. During the entire nine months she had lost flesh more or less rapidly, and during the last three months she had been losing flesh and strength very rapidly and was in poor condition. The tumor occupied the right side and extended across the median line. It was easily palpated. Urine analysis showed no change in the urine. This kidney was so large that it was thought best not to remove it by the lumbar incision. The woman's condition would hardly permit of attempts at catheterization of the ureters to determine the condition of the other kidney. She was much exhausted, even by the examination, so it was determined to do a transperitoneal nephrectomy as it would give the advantage of being able to determine definitely the existence and character of the tumor, for in cases of cystic kidney we know it is frequently congenital, and the condition is frequently present in both kidneys. The left kidney could easily be made out and was found normal in size and position. The peritoneal wall was divided, and in that position the tumor was fully exposed. The kidney was removed and the wound closed, the operation taking in all from the beginning to the end of dressing fifty-five minutes. She left the table in very

good condition, and during the subsequent twenty-four hours passed twenty-four ounces of urine, at three different times, voluntarily, eight ounces each time. During the subsequent twenty-four hours she passed only six ounces of urine, and forty-eight hours after the operation she showed signs of beginning uremic convulsions. With chloral and bromid the convulsions were kept off, but she was on the verge of convulsions until she died last night about sixty hours after the operation, only secreting after the first twenty-four hours in all six ounces of urine. During that time the temperature was never above 99½°, and the pulse, until the uremic symptoms set in, about 100. The six ounces of urine showed a very large percentage of albumin.

TUMOR OF STOMACH.

Dr. H. B. Delatour also presented a specimen which had been removed from a young woman, twenty-seven years of age, married, who was in good health until about two years ago when she began to suffer dyspeptic symptoms, and her weight diminished to ninety-five pounds. During the last few months she had been able to retain no food at all. She took milk and retained it a number of hours and then vomited it. Her suffering was intense, and the pain was referred to the region of the pyloris. A tumor could be distinctly felt, and at times as distinctly seen.

An exploratory laparatomy was decided upon, and on exploring the stomach he made out that the mass occupied the pylorus and a considerable portion of the stomach wall. It was a favorable case for removing the tumor, and he proceeded to do so, dividing the duodenum an inch and a half from the pylorus and the stomach near the esophagus. The stomach end was sewed up except for a place at the lower portion of the incision long enough to admit the end of the duodenum. Silk sutures were used. The patient has done very nicely. This evening the reporter saw her—she was operated upon on Monday morning, and she had a temperature of 100°, and a pulse of 106, absolutely no distension and no pain. The exact character of the tumor will need a complete microscopic examination to determine.

Dr. Delatour added that there was one objection to the lumbar operation; it does not give an opportunity to palpate the other kidney, and that is of importance, particularly in these cases of cystic kidney because the same condition is liable to be present on both sides.

CORRESPONDENCE.

THE DIFFERENTIAL DIAGNOSIS BETWEEN MENTAL ABERRATION FROM INDULGENCE IN SPIRITUOUS LIQUORS AND CEREBRAL DISTURBANCE AND CONFUSION OF THOUGHT FROM BEING STRUCK BY A TROLLEY CAR.

171 JORALEMON STREET, BROOKLYN, September 1, 1898.

TO THE EDITORS OF THE BROOKLYN MEDICAL JOURNAL:

I enclose a newspaper article and comments thereon which I think worthy of a short notice in the JOURNAL to call attention to the fact that the police are extremely inferior diagnosticians, especially in differentiating alcoholic coma from other forms of coma.

Yours very truly,

L. D. MASON, M.D.

STEINERT "SEEMED DAZED."

ARRESTED FOR INTOXICATION AFTER BEING STRUCK BY A TROLLEY-CAR.

Louis Steinert, a court stenographer, living at 241 East Fifty-third street, Manhattan, spent last night in a Flatbush police station. His crime was, according to the policemen who arrested him, that he "seemed dazed" after being knocked down and rolled twenty-five feet by a trolley-car.

Mr. Steinert, whose card indicates that he is a stenographer in the Municipal Court of the Borough of Queens, was riding a bicycle in Fort Hamilton avenue. According to witnesses, he was riding rapidly and steadily and had perfect command of his wheel. He turned into Flatbush avenue, and as he did so was struck by a car of the Brooklyn Heights Railroad, in charge of Motorman Charles Kuhne. The bicycle was smashed, but Steinert fortunately escaped from getting under the car. The fender struck him and pushed him along for a distance of twenty-five feet before the car was stopped.

Steinert was badly shaken up and much bruised. Roundsman Knox of the Grant Street station came up and asked him if he wanted an ambulance called. Steinert replied in a dazed way that he did not think he was seriously enough hurt for that. Then Knox arrested him and locked him up for intoxication. When the Sergeant at the desk was asked if Steinert was intoxicated, he replied: "Well, he seemed dazed."

Read the above carefully, and compare the ordinary symptoms of alcoholic intoxication—either in your own unfortunate experience or that of your equally unfortunate neighbors. Did you feel or did they feel as if they had been struck by a trolley-car? Roundsman Knox and the Sergeant, who locked up Steinert,

certainly and literally added "insult to injury," and after the trolley man had "got through with him" deliberately took away his good character "because he seemed dazed." Neither Roundsman Knox or the sergeant at the desk had a right (after a severe accident, the man being pushed along the track twenty-five feet, and otherwise bruised and confused) to place him in a cell. A physician or surgeon should have been summoned and their judgment under the circumstances acted on.

Some time since the Kings County Medical Society appointed a committee to investigate concerning the care of persons who were found unconscious on the street or elsewhere by the police, and also more particularly to reform the action of the hospital authorities concerning the reception or refusal to receive all such persons—under certain conditions. The conclusions that the special committee finally arrived at after considering the whole matter from a scientific and humane standpoint, was that all persons found upon the street in an unconscious or semiconscious condition, or in such condition as not to care for themselves, should receive prompt medical aid, and if necessary be removed to the nearest hospital, and that the mere supposition of intoxication should not interfere with such care or disposal of the persons rendered unconscious or unable to care for themselves. The committee showed that not unfrequently persons were seriously injured while intoxicated, and that frequently alcoholic liquors were given to persons after injury or sickness; so that the mere fact that the patient was under alcoholic influence should not exclude the possibility of possible serious injury or disease.

The fact was that Steinert was suffering from slight cerebral concussion, resulting in confusion of thought and simulating a mild form of alcoholic intoxication. It was simply a case of mistaken diagnosis on the part of doctor Roundsman Knox and the sergeant who acted as consulting surgeon in the case.

The remedy, a night in the lock-up, was rather severe and totally uncalled for. The system is a wrong one that put Roundsman Knox in the position to differentiate between cerebral concussion from a trolley-car accident and a mild form of alcoholic intoxication. We suggest a new question to be answered by all applicants for the police force, in accordance with the rules governing the civil-service examination: "What are the main points in the differential diagnosis between moderate cerebral concussion and consequent mental disturbance and the milder forms of alcoholic intoxication?"

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

LECTURES ON TUMORS. By John B. Hamilton, M.D., LL.D., Professor of Surgery, Rush Medical College and Chicago Polyclinic, etc. Third edition; 21 illustration. Philadelphia: P. Blakiston's Son & Co.; 1898. Pp. 143. Price, $1.25 net.

This book is based on the lectures delivered by its author before his medical classes, and has, therefore, the charm of the colloquial style. It follows the last decennial revision of the nomenclature of the Royal College of Physicians, which includes only neoplasms and cysts. It deals more especially with the general pathology and clinical history of neoplasms, the treatment discussed not including operative surgical methods.

A MANUAL OF INSTRUCTION IN THE PRINCIPLES OF PROMPT AID TO THE INJURED, INCLUDING A CHAPTER ON HYGIENE AND THE DRILL REGULATIONS FOR THE HOSPITAL CORPS, U. S. A. Designed for Military and Civil Use. By Alvah H. Doty, M.D., Health-Officer of the Port of New York. Second edition, revised and enlarged. New York: D. Appleton & Co.; 1898. Pp. 302.

In this second edition a section on hygiene has been added, and the drill regulations for the Ambulance Corps of the United States Army.

A MANUAL OF HYGIENE AND SANITATION. By Seneca Egbert, A.M., M.D., Professor of Hygiene in the Medico-Chirurgical College of Philadelphia. In one handsome 12mo. volume of 360 pages with 63 engravings. Cloth, $2.25 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

This manual is a most excellent one. Its teachings are those of the best sanitary authorities and it will, we are confident, be very acceptable to teachers of hygiene in medical schools.

HAY-FEVER AND ITS SUCCESSFUL TREATMENT. By W. C. Hallopeter, A.M., M.D., Clinical Professor of Pediatrics in the Medico-Chirurgical College of Philadelphia, etc. Philadelphia: P. Blakiston's Son & Co.; 1898. Pp. 137. Price, $1.00 net.

Professor Hallopeter gives in this little volume a résumé of the numerous theories which have been advanced to account for hay-fever, and the treatment which he has adopted as a result of his experience in 200 cases. He believes that the majority of cases are curable, and that positive relief, without change of residence or inconvenience, can be afforded during the period

of occurrence. His treatment consists, essentially, in the use of Dobell's solution, followed by menthol and liquid cosmolin.

THE DETERMINATION OF SEX. By Dr. Leopold Schenk, Professor at the Imperial and Royal University, and Director at the Embryological Institute in Vienna. Authorized translation. The Werner Company, Chicago, Akron (O.), and New York; 1898. Pp. 222.

This book, for which the profession has so long waited, will be a disappointment to many.

Schenk's "theory" may be briefly summarized as follows: The condition of a woman in a well-regulated married state, when five or six girls are born, one after another, must be considered to be of a kind that departs more or less from the normal. This departure from the normal shows itself by the presence of sugar in the urine. Whenever, therefore, it is desired that the progeny shall be male, dietetic treatment is to be resorted to until even the minutest trace of sugar has been made to disappear. This treatment consists in giving the mother a highly nitrogenous diet with fat, and adding only so much carbohydrate as is absolutely necessary to prevent its want being felt. This diet should be begun two or three months before impregnation, and continued until the third month of pregnancy.

Professor Schenk's theory has practically to do only with the production of the male sex. He says: "The wish to have female progeny is a desire for the gratification of which it is not at present possible to give any direction."

YELLOW FEVER. Clinical Notes. By Just Touatre, M.D. (Paris.) Former Physician-in-Chief of the French Society Hospital, New Orleans, etc. Translated from the French by Charles Chassaignac, M.D., President New Orleans Polyclinic, etc. New Orleans: New Orleans Medical and Surgical Journal, Ltd.; 1898. Pp. 206.

This book is based on a study of the last thirty-three epidemics of yellow fever which have prevailed in New Orleans, through nine of which the author has passed. As a practical result of this experience he has formulated the following laws: First, all the great epidemics, as well as those of medium intensity, which have ravaged New Orleans, have always begun in May, June, or July, and it has taken one, two, or two and one-half months of incubation, after the importation of the first case or cases, before the disease has become epidemic or has claimed many victims.

Second, all epidemics beginning in August or September have been mild, have lacked virulence, and have shown a light mortality.

Dr. Touatre is a believer in the Sanarelli bacillus icteroides. He also believes that a patient with yellow fever may communicate, and often does communicate, the disease to a person nursing him, one living in his room, living in the same house, or the adjoining one. The bacilli develop outside the human body in a favorable culture-medium; just what this is the author states is unknown: it may be the damp mud of the streets and gutters overheated by the sun.

THE OFFICE-TREATMENT OF HEMORRHOIDS, FISTULA, ETC., Without Operation, Together with Remarks on the Relation of Diseases of the Rectum to Other Diseases in Both Sexes, but Especially in Women, and the Abuse of the Operation of Colostomy. By Charles B. Kelsey, M.D., late Professor of Surgery at the New York Post-Graduate Medical School and Hospital. 12mo., cloth, pp. 68. New York: E. R. Pelton; 1898.

Three clinical lectures are here published in book form. The title is an attractive one, but is misleading; all practitioners would welcome a book which would teach them how many of the diseases of the rectum could be successfully treated without resorting to an operation, and patients in turn would welcome the physician who could so treat them. If the reader of the book thinks that he will gain this information by the reading he is doomed to disappointment. The first chapter may be summarized as follows: Many diseases of the rectum, hemorrhoids, fistula, and others, can be cured permanently without an operation if you know how; that is a matter that you must find out for yourself, for I have not the time to teach you in one lecture.

The page caption, "Treatment of Hemorrhoids," is kept throughout the brochure, though the remaining pages tell even less than those of the first chapter. In the second lecture the statement is emphasized that the rectal specialist should be a good general surgeon, especially familiar with the operative treatment of pelvic disorders in both sexes. Proper surgical perspective would be preserved if the author maintained that every surgeon worthy of the name should be competent to treat surgical affections of the rectum, or of the genitalia, and to give each patient that treatment or operation which promises the best ultimate results. A concrete illustration of this principle is shown in the closing lecture: Colostomy is comparatively simple; it does not cure, and often makes the patient more to be pitied than before the operation. In its place, exsection of the rectum, if done by a competent surgeon, though attended by greater risks, will give more lasting benefits, and is, therefore, to be preferred in many instances.

It is interesting to note that all the females who come to the hospital for treatment and are made the objects of clinical demonstration are "women;" those others who are frequently referred to as having been cured of piles and similar ailments at the author's office are all "lady patients." Dr. Kelsey is to be congratulated in having eliminated women from his private practice.

That the author is capable of writing a book that shall contain definite information is well known to all who are familiar with his larger works. In the present instance, at the close of an hour's reading, one wonders why the book was written. Not for any desire to impart knowledge, for that it does not do. Perchance, as a pleasing souvenir for members of his class at the Post-Graduate; justification enough, surely. Perchance the author has here a preface to something that shall be published later, giving his methods *in extenso*. Perchance, in view of the many controversies that have arisen as to the best way to cure piles, he wishes to illustrate the old nursery rhyme:

"The mop that stood behind the door,
Threw the pudding-stick on the floor;
'Oddsplut!' said the gridiron, 'can't you agree?
I'm the head constable, send them to me.'"

HENRY P. DE FOREST.

ACCIDENT AND INJURY. Their Relations to Diseases of the Nervous System. By Pearce Bailey, A.M., M.D. Pp. 430, with 55 illustrations. New York: D. Appleton & Co.; 1898.

A somewhat careful perusal of this book shows it to be one of unusual excellence. It is pleasantly written and printed in type easy of reading. The illustrations are good and useful. The historical method of approaching a medical subject is nowhere more in place, and here is happily carried out. The facts and views, as presented, are in an exceptional degree trustworthy, up-to-date, and yet duly conservative.

Now, however unstinted praise a work may deserve, there are always some points that have been overlooked or where views differ.

On p. 16 the summary of reasons for making a presumptive diagnosis of old syphilis is not by any means adequate.

In examining the interossei (p. 29) there is no reference to active spreading of the fingers as evidence that they are intact.

Experience and observation bear out his conservative view that in most medico-legal cases where organic nervous disease like paresis or tabes is found, it had its start before the accident. Some of our testifying friends who so certainly and frequently discover "disseminated sclerosis" as a sequel of accidents will not be able to fortify their cases much from this work.

It is questionable whether traumatic epilepsy develops so generally within a year or so after the injury as he presumes.

On p. 140 he says: "If syphilis alone were capable of producing general paresis, it would be reasonable to suppose that the relative frequency of the occurrence of the two diseases would be more equal." This form of argument has fostered so many medical errors that it is surprising to meet it again.

He is shy about attributing tabes, generally, to syphilis, because of inability to give its modus operandi. This may be scientific but it is not practical.

That the ciliospinal impulse passes out through the first dorsal root (p. 37) is true at most for only a portion of cases, many at least being by the second dorsal.

It is a little inexact to put ankle-clonus as evidence of *degeneration* of the pyramidal tract (p. 41), since it often occurs before that has time to develop. In distinguishing whether wrist-drop be due to head or musculospiral injury, he does not clearly state that in the latter the supinator longus is pretty generally involved and is then the only muscle that often shows reaction of degeneration. There is also for some time the local tenderness of the nerve at the point of injury.

As to the value of pupillary inequality as a sign (p. 254), it is not even necessary to assume neurasthenia. For Reber (*Medical News*, August 24, 1895) has shown that it occurs to some degree in about one-quarter of all healthy individuals; and, including the latent form, in as high as one-third.

In speaking of hysterical joints (p. 313), he says edema is rare; this is true as to any general swelling, but slight edema somewhere about the joint is not unusual.

He says truly (p. 316) that the convulsive movements of hysteria have "an exaggerated character" as compared with epilepsy. It may be put much stronger than this: Whenever we find a young person in such convulsions that he has to be held down for fear of self-injury, the diagnosis of hysteria or malingering can pretty safely be made.

In cases of blindness the pupillary reactions are not necessarily lost, although from what he says on p. 384 one must conclude so.

Late-developing intracranial hemorrhage does not seem to receive any share of attention. And one reviewer has called attention to the non-consideration of acute mental diseases as a result of injury.

Of course, the most interesting part of the book is that treating of the functional neuroses, classed by him under traumatic hysteroneurasthenia and its variations. He, of course, acceps implicitly, as far as it goes, the modern view of hysteria as a separate disease entity. What he says on these matters is far from being the final word, but it depicts well the present stand of our knowledge.

He has some good remarks on hydriatics. Therapeutically, such patients should be urged in most cases to settle their claims and get rid of the legal incubus, especially as most of our railroad medical men are quite favorably enough disposed to claimants.

WILLIAM BROWNING.

CATARACT OPERATIONS; MULES'S OPERATION ILLUSTRATED BY SKIAGRAPHS; CAPSULOTOMY; OPERATION FOR PTERYGIUM. Clinical Lecture delivered at the Medico-Chirurgical College. By L. Webster Fox, A.M., M.D., Professor of Ophthalmology in the Medico-Chirurgical College, Philadelphia, Pa. [Reprinted from "International Clinics," Vol. II., Eighth Series.]

This reprint gives made practical hints upon the subjects under consideration. But the lecturer's method of doing a capsulotomy differs somewhat from the usual operation. The technic is as follows: With a broad needle, an incision is made in the cornea and through the capsule in a vertical direction. Then he passes De Wecker's scissors through the corneal opening, allows the blades to separate, passes one blade behind the capsule, the other to the front horizontally, and with one snip divides the capsule. However, it seems that this method would involve a greater amount of traumatism without any corresponding advantage.

A full description of Mules's operation is given, and also three skiagraphs showing silver balls and glass balls in position. Doubtless in selected cases Mules's operation is preferable. Cross (*Trans. of the Ophthalmological Society of the United Kingdom*, 1897) does not favor the operation and says that a radical removal of the whole organ would seem to be a safer preventive [of sympathetic ophthalmia] than the most thorough cleaning out of the scleral contents.

JAMES INGALLS.

ILLUSTRATED SKIN DISEASES. An Atlas and Text-Book, with Special Reference to Modern Diagnosis and the Most Approved Methods of Treatment. By William S. Gotheil, M.D., Professor of Skin and Venereal Diseases at the New York School of Clinical Medicine; formerly Lecturer on Dermatology in the New York Polyclinic; Consulting Dermatologist to the Orphan Asylum of the Sheltering Guardian Society; Dermatologist to the Lebanon Hospital, the Northwestern and the West Side German Dispensaries; Fellow of the New York Academy of Medicine, etc.

Of this work which will, according to the author, be completed in twelve portfolios, only three are before us, and it must be said of these exemplars that there is much to commend them as to typographical excellence, manageable size of volumes (they being quartos), and quality of illustration. It must also be said, as well, that they hardly fill the traditional "long-felt want," so many and so excellent are the treatises and illustrative atlases on this subject that have within the last decade been brought before the medical public in this and other countries.

The text of the first two folios, or about fifty-four pages, is taken up by the usual introductory matter, anatomy, physiology, general therapy classification, etc., and the text is for the most part concise, clear, and excellent in character. We have a decided objection to the chapter on classification, which is a modification of that of Jessner; we deem this unfortunate, as the well-known classification, anatomo-pathological in character following Hebra, is now almost universally adopted except in France, and is in our opinion decidedly preferable. It does seem strange, and to us entirely unreasonable, for instance, that so clear an etiological division as parasitic diseases of the skin could and does make of itself should be grouped with inflammations, such as pemphigus, herpes, and the like.

Of the few skin diseases which are considered (Folio III.) the description given is clear and good. The consideration of therapy, usually so full in American treatises, seems to us wanting in suggestion.

Of the illustrations much can be said in praise, the microphotographs given in the pages devoted to anatomy and physiology are both original and good. Concerning the new feature, the colored photogravures, they have the excellencies and defects of the method. Some of them give as good a representation of lesions as is possible—perhaps the best—notably in one illustration, that of dermatitis venenata, and another that of a gummatous lesion. In others again the high lurid color both of the photo itself and its atmosphere, so to speak, render them in our opinion unnatural.

We shall look forward to the coming Folios with interest.

S. SHERWELL.

HANDBOOK OF MATERIA MEDICA FOR TRAINED NURSES; Including Sections on Therapeutics and Toxicology, and a Glossary of Terms with Dose and Use of Each Drug. By John E. Groff, Ph.G.,

Apothecary in the Rhode Island Hospital, Providence. Philadelphia: P. Blakiston's Son & Co., 1898. Pp. 235. Price, $1.25 net.

When we read the title-page of this book we were prepared to find good grounds for unfavorable criticism of its contents, for we thought what right has a Ph.G. to discuss "Therapeutics," and especially with trained nurses? On examining the book we found that our impression was not an unjust one, formed as it was on the moment. For instance, in dealing with bichlorid of mercury the author states that it "is given internally in the form of tablets of $^1/_{32}$ of a grain as an alterative." He then takes up calomel, which he states is used as a cathartic and cholagogue, and gives the dose as from $^1/_8$ to 10 grains. The red and the yellow iodids of mercury he says are also used as alteratives. He then proceeds to give the symptoms of poisoning by mercuric chlorid, but omits to connect this in any way with the bichlorid of mercury of which he already treated. Tincture of myrrh he describes as a mouth-wash and emmenagogue, dose 15 m. to f. ʒ ss. Such a loose way of handling therapeutics seems to us to demand condemnation.

We must also take exception to some of his definitions. He defines a disinfectant as an agent which decomposes and renders noxious gases harmless, instead of being an agent which destroys the infective powers of infectious material. Alteratives he defines as "those medicines which produce a beneficial change," rather a large and comprehensive class, one would think.

Taken as a whole we cannot see that the book meets any want that now exists.

A Compend of Diseases of the Skin. By Jay F. Schambery, A.B., M.D., Associate in Skin Diseases, Philadelphia Polyclinic, etc. With 99 illustrations. Philadelphia: P. Blakiston's Son & Co., 1898. Pp. 307. Price, 80 cents net.

This compend, No. 16 of the "Quiz Compends," is based on the works of Crocker, Duhring, Hyde, Robinson, Brocq, Van Harlingen, and others, the classification followed being that of Duhring. It is one of the best of the books of its kind.

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

ENTERED AT BROOKLYN, N. Y. POST OFFICE AS SECOND CLASS MATTER.

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VOL. XII. No. 11. WHOLE No. 131. | BROOKLYN, N. Y., NOVEMBER, 1898. | Single copies 25 cents $2 a year, in advance

ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

PAIN AND ITS TREATMENT.

BY GEORGE L. KESSLER, M.D.,
City Hospital, New York City.

It is not the purpose of the writer to discuss this subject from a psychological standpoint, but merely an attempt to systematize it for therapeutical purposes.

The busy practitioner is being constantly called upon to relieve urgent symptoms at once, and gains more credit thereby, than by putting the patient on a specific for the disease without first considering his comfort.

Before making any attempt to classify the forms of our subject, it is proper that a definition of pain should be given.

Pain may be defined as a distressing sensation of more or less intensity caused by the stimulation, over-stimulation, irritation, malnutrition, injury or disease of some portion or all of the sensory nervous system.

The classification of Professor Wm. H. Thomson will be used here as the most suitable for the purpose.

According to the above authority, pain is divided into five

varieties, viz.: inflammatory, stretching, and pressure, neuralgic, cutaneous reflex, and subjective.

I. *Inflammatory pains* are characterized by tenderness on pressure over the affected area, limited motion, and disturbed function of the same area.

When affecting serous membranes (pleura, peritoneum, uveal tract, etc.) the pain is sharp and stabbing. In mucous membranes a feeling of soreness, or burning sensation. In fibrous tissue or bone, a dull boring is felt. In the skin, itching if superficial, and burning or searing feeling if deeper.

Fibrous-tissue pains usually grow worse at night and when the weather changes, as in rheumatism and syphilis.

Pleuritis is an inflammatory affection because it has the three characteristics given above; tenderness on pressure over ribs, limited motion of chest wall, and disturbance of respiratory function.

Other examples may be mentioned: peripheral neuritis, pleurodynia, gastritis, enteritis, peritonitis, cystitis, periostitis, nephritis, splenitis, hepatitis, etc., all show the three characteristics.

Pulsation and throbbing of an inflamed organ or part is often felt, and is due, as is well known, to the increased amount of blood in the part, causing congestion and pressure on the nerve-filaments. What are the indications for treatment?

(*a*) Find the cause and remove it if still present. In neuritis you would remove the patient from the influence of arsenic, lead, mercury, alcohol, cold, exposure, etc.

(*b*) Rest for the affected part.

(*c*) Removal from pressure.

(*d*) Relieve congestion.

(*e*) If pain still persists, use anodynes for their effect on the nerves.

(*a*) *To remove the cause* is not always possible, but when it can be reached by means at our disposal we should do so at once.

Magnets of a special pattern are used when foreign bodies are the cause in the eye. Forceps and the finger for foreign bodies in larynx, esophagus, nose, etc. Warm water alkaline douches are generally used for removal of foreign bodies in the ear. In the case of beans or other articles that would swell from water use alcohol. The knife has often to be used for removal of pus from cavities, etc., in the tissues, also for foreign bodies in the muscles. Stones in the kidney may sometimes be dissolved, though usually have to be removed by knife. Blisters will re-

move the effusion of pleurisy at times, as well as relieve the pain.

Space will not allow of any further particularization, so statements are made general.

(*b*) Rest for affected part is obtained by mechanical and medicinal means.

Mechanical.—Strapping of the painful side, in pleurisy, with rubber plaster overlapping the median line in front and back at least three inches; and some prefer all the way around This is applicable to pleurodynia also. Some fractures, as that of patella are strapped. Sprains are relieved in this way.

Plaster bandaging relieves pain of fractures by immobilizing. Pott's disease of spine, peripheral neuritis, hip disease, and sciatica are much relieved by rest so obtained. Splints and braces are used for same conditions.

Venesection for an inflamed heart with high arterial pressure.

A "shelf" may be made by stretching a band of rubber plaster from front of one thigh to the other to rest an inflamed testicle.

Medicinal.—The most reliable drug to meet this indication is opium in some form. Although it deadens pain by its action on the nerve-centers, its value in peritonitis and enteritis depends a good deal on the inhibition of peristalsis. In dysentery and cystitis by decreasing the tenesmus.

In affections of the rectum, bladder, and vagina the powder or extract may be used in suppositories in doses up to 2 grains of extract. It is generally combined with belladonna, cocain, and iodoform in these conditions. Internally opium acts better than morphin when it is the desire to stop peristalsis. The deodorated tincture in doses of 20 mimims is good.

Fl. ext. ergot works well in meningitis at times.

(*c*) *Removal of Part from Pressure.*—Sometimes we are unable to do this satisfactorily. Water-beds are used in bed-sores, meningitis, etc. Jury masts and plaster casts in Pott's disease to support the vertebræ. Buck's extension, Phelp's, Taylor's, and numerous other braces in hip disease.

Elevation of extremities causes lessening of congestion. Incision may be made as in periostitis and abcesses.

The local application of extreme cold or heat. Cocain, menthol, antipyrin, chloral, camphor, and astringents.

Cocain and antipyrin act best on mucous membranes; if applied to the skin give hypodermically in 4-per-cent. solution.

(*d*) *Congestion is relieved* by the same means used for removal

of pressure, with addition of massage, venesection, and cardiac sedatives, as aconite in acute tonsillitis and other acute congestions. Massage is more for subacute and chronic swellings as in fractures, sprains, etc. Cardiac stimulants for chronic congestions. In cerebral congestion heat to the feet, cold to head, venesection and purgatives. Calomel is especially good. Leeching in meningitis and eye inflammations. Congestion of liver is relieved by counter-irritation over the right side, and cholagogues; sodium phosphate is especially good. Aconite in full doses and avoidance of spiced foods. When chronic, the pure nitrohydrochloric acid in 3-minim doses, well diluted, acts well.

II. *Stretching and Pressure Pains.*—

CHARACTERISTICS:

Stretching.	*Pressure.*
(1) Onset sudden, disappearance the same, though it may leave a feeling of soreness.	(1) Constant.
(2) Spasmodic.	(2) Radiate from a point of greatest intensity.
(3) Pain is colicky usually and accompanied, sometimes, by vomiting, sweating, and faintness.	(3) Remits, but never intermits.

Examples of Stretching Pains.—Renal colic due to calculi, cancerous or other débris passing from kidney to bladder along the ureters. Hepatic colic from gall-stones passing through hepatic, cystic, and common ducts toward duodenum. Enteric colic from accumulation of gases in the intestines, due to irritating or decomposing food; intestinal obstruction, etc.

Lead, mercury, and arsenic also cause colic.

Locomotor ataxia gives colicky pains at times, which, though usually considered as neuralgic, may be placed under this heading, being probably caused by pressure around the posterior roots in the cords. This condition should be diagnosed from ordinary colic by absence of any apparent cause in abdomen or diet, and presence of eye symptoms, Romberg's symptom, loss of knee-jerk, incoordination, etc. Suspension of the patient by a special apparatus has been of use in relieving pains of this condition. Coal-tars also used.

Dysmenorrhea may be mistaken for ordinary colic, but inquiry into the conditions of the sexual organs should make the diagnosis easy.

Acute pancreatitis has been reported with colicky pains radiat-

ing at times to the right shoulder. This condition is usually mistaken for intestinal obstruction. Prognosis bad.

Cholangeitis, embolism of superior mesenteric artery, aneurism. nephralgia, appendicitis, and all forms of peritonitis cause colicky pains at times.

Peritonitis differs from intestinal colic in being very tender on pressure over abdomen, whereas the colic is usually relieved, showing there is no inflammation present in the latter.

Raynaud's disease, diabetes, Pott's disease of spine and pneumonitis may cause pains in the abdomen; the two latter in children mostly.

Pressure-pains are illustrated by tumors of all kinds involving nerves or nerve-centers in the brain, cord, thorax, and abdomen or extremities. Tumors in the posterior part of the abdomen cause more pain than those anteriorly.

Obturator hernia (rare) may cause pain at the knee by pressure on the obturator-nerve. Impacted feces, enteroliths, osteosarcomata, osteomata, and callus from fractures of femur have caused sciatica by pressure on that nerve. Aneurism of arch of aorta by pressure on the sympathetic and left pneumogastric. Aneurism of descending aorta by pressure and erosion of vertebræ.

Diseases of the spine, such as Pott's, spondylitis deformans, syphilis; also, fractures and dislocations may cause pain by pressure on the cord and intercostals, cervical, and lumbar nerves.

Psoas abscess has been known to be mistaken for sciatica. Ovarian tumors, pregnancy, and a displaced uterus may cause symptoms of sciatica.

Indications for Treatment.—

(*a*) Removal of cause if possible.

(*b*) Relief of the distress.

(*a*) *Removal of Cause.*—If a tumor is accessible, cut it out, or attempt electrolysis on it, as in fibroids of the uterus. The negative pole must always be placed in the tumor. Impacted feces are removed by a wooden spoon after being softened with enemata of soapsuds and oil. Aneurisms in the extremities are excised, or proximal and distal ligature is practised. Needling, galvanism, introduction of foreign bodies are only mentioned, and not recommended in the treatment of aneurism. Gummata may be removed by the use of potassium iodid. In spinal disease, plaster jackets and braces are useful in removing the pressure from the nerves. Plaster jackets must be put on while the patient is suspended. Keep patient in bed until the plaster is

thoroughly dry, and always be sure to pad around the bony points of the body. Ergot is used to expel fibromata from the uterus if they are of the submucous variety. In gall-stone disease, if persistent, cholecystotomy is indicated. Potassium iodid and rest in bed are recommended for aneurisms of the larger vessels. Gummata of the brain disappear at times under treatment by salicylate of mercury, hypodermatically, dose about 1½ grain in oil when potassium iodid fails. In the pain of amputation stumps, we may have to reopen the stump and shorten the nerve to prevent it being pressed in the cicatrix.

Nerves may be resected when a tumor cannot be removed. In enteric colic clean out the bowels with castor oil, Epsom salts, or calomel. Stop contact with lead, arsenic, and mercury, if they are the causes, and diet the patient. Lavage, enemata, and operation if due to obstruction in the intestines.

(*b*) *Relief of Distress* may be immediate, if the proper measures are taken, though sometimes everything fails.

In pains due to causes that cannot be removed, and are continuous, our only resort is morphin, which may be given hypodermatically, or per os. Where the pain is due to stretching, as in renal colic, we endeavor, by the use of hot sitz baths and stupes, hot enemata, belladonna or atropin, and opium, internally or hypodermatically, ether or chloroform by inhalation, to relieve the muscular spasm and the pain. Vomiting often accompanies this condition, so drugs are best administered hypodermatically. For hepatic colic the same measures may be used. Some authorities recommend olive oil in tablespoonful doses repeated often, and claim it acts well.

The pain of renal colic usually radiates from its point of greatest intensity, the kidney, downward along the course of the ureters to the bladder, and is accompanied by blood and perhaps stones in the urine. In the hepatic form the pain is along the course of the gall-duct, and radiates, if at all, upward toward the right shoulder and around to the back. Urine may show bile pigment, and the patient be jaundiced.

Enteric colic is controlled by camphor, capsicum, ginger, belladonna, hyoscyamus, stramonium, turpentine, charcoal, sodium benzoate, sodium sulphocarbolate, salol, naphthalin, betanaphthol, thymol, eucalyptol, and numerous other carminatives, antispasmodics, intestinal antiseptics, and absorbents combined with opium or brandy. The antiseptics prevent, or are supposed to prevent, decomposition; charcoal is supposed to act as an ab-

sorbent; camphor stimulates the solar plexus, and is also a sedative; the belladonna group relieves the muscular spasms.

When accompanied by diarrhea I have markedly reduced the flatulence with eudoxin in 5-grain doses repeated every two hours, if necessary. The lower bowel is sometimes relieved of flatus by the introduction of a rectal tube.

Externally.—Massage of abdominal walls, counter-irritation, as spice poultice, mustard plaster, turpentine stupes, and enemata. Use about dram ii. in an enema of one quart if case is bad. Wash out the lower bowel.

III. *Neuralgic Pain.*—Many pains under this heading are of unknown origin and pathology. Anything in the way of pain for which we can find no cause is attributed to neuralgia or hysteria.

In many cases of this form of pain nothing pathological can be found in the nerves, though this is not always so. Slight neuritis and degeneration have been found in certain cases, as in the so-called neuralgic pains of locomotor ataxia, which were mentioned under pressure-pains.

Characteristics of this form are that they intermit. No inflammation present as a rule; no tenderness on pressure over the seat of the pain, which is usually sharp, stabbing, shooting, burning or aching.

Neuralgia has been called the crying of nerves for more blood. It certainly is true that neuralgia is often associated with anemia and debility.

Etiologically we may divide this pain into a toxic and non-toxic form.

The *toxic* is, as its name indicates, due to some form of poisoning, usually general. We have examples in malaria, Bright's disease, gout, rheumatism, diabetes, syphilis, alcohol, lead, arsenic, mercury, migraine, the infectious fevers, arteriosclerosis, and auto-intoxications from intestinal tract, etc.

The *non-toxic* are due to anemias, traumata, exposure, and cold; reflexes of various sorts, as eye-strain, nasal polypi, foreign bodies in the ear, decayed teeth; painful ear in disease of the stomach, also tic-douloureux, caisson disease, gastralgia, nephralgia, erythromelalgia, Morrison's disease, Morton's painful toe, angina pectoris, neuralgia of pregnancy. Debility is the most frequent cause.

The site of a neuralgic pain about the head is supposed to point to the cause, and for this reason when a patient complains

of occipital neuralgia we think of eye-strain, cold, or a circulatory disturbance as in uremia, etc.; if of pain in the vertex, of cerebral disease, ovarian disease, hysteria or neurasthenia; if the frontal region is affected, we examine the eyes, stomach, frontal sinuses, nose, etc. In facial neuralgia, cold and exposure, decayed teeth, etc., are suspected.

Many so-called neuralgic pains are caused by the pressure of tumors, but are not true neuralgias, as they do *not* intermit.

Herpes zoster is a form of neuralgia with an eruption of vesicles along the course of nerves, usually the intercostals.

There have been more drugs recommended to treat this class of pain than any other, and if one looks over the list he is unable to make a choice unless experience has taught him which are the best for his purpose.

The writer has read article after article for information about treatment, and has almost invariably found that the authors advise symptomatic treatment, or the use of antipyretics, analgesics, etc., but never state what antipyretics, analgesics, etc., they use; or, if they do, the dose and method of administration are left out.

It will be impossible to go into detail in an article like this, but the dose at least, of each drug will be put down, as mentioned.

Treatment.—In toxic forms the treatment varies with the cause; *viz.*, in syphilis, potassium iodid in doses of grains x. t. i d. gradually increased until patient shows signs of iodism. Small doses of mercury sometimes act when the iodid fails. If patient is anemic, give $\frac{1}{30}$-grain of arsenic iodid combined with $\frac{1}{30}$-grain of biniodid of mercury, and iodid of iron grain i.

In malaria quinin to physiological limit combined with pulv. capsicum grain ii at a dose; of ginger same, to increase rapidity of absorption. Fl. ext. of ergot in ʒ i. doses works well for the headaches; arsenic in $\frac{1}{60}$-grain dose repeated will act well sometimes, especially in the chronic form.

In Bright's disease besides giving diuretics, diaphoretics, and purgatives, iron in the form of Basham's mixture combined with tincture of strophanthus will often relieve the pain, or, if arterial tension is high, nitroglycerin in doses of $\frac{1}{100}$-grain t. i. d. If these drugs do not relieve the headache, the coal-tars, or small doses of morphin may be given.

To prevent repetition, the names of the principal coal-tars will be mentioned, once for all, at the end of this article.

In lead poisoning use potassium iodid grain x. t. i. d., purga-

tives of Epsom or glauber salts. Morphin and belladonna for the colic.

In the pain of all sthenic fevers use coal-tar preparations after purging the patient. In fevers like typhoid they must be used with care and combined with cardiac stimulants if the heart is weak. Sometimes it is better not to give them at all.

In rheumatism the salicylic-acid group is used. Salicin (5–30-grains), salol (5–15-grains), salophen (15–25-grains), agree better with the stomach than the pure acid or salicylates. Strontium salicylate will be retained when the others are not tolerated.

Kryofin in doses of 7 grains has often markedly relieved the pains of sciatica. Oil of gaultheria and methy-salicylate are used internally and locally with good effect.

In gout, colchicum is the specific in doses of the wine of the seeds as high as 30 minims q. i. d. The bowels must be watched for too severe purging. Potassium iodid, and the alkalines internally, combined at times with the salicylates and coal-tar preparations. Locally, hot applications, Fuller's solution; wrap joints in cotton and oil silk. Cataphoresis in this and sciatica is used with success at times; chloroform is the drug used.

Counter-irritation is used especially in sciatica in the form of cautery (galvanic, Paquelin or white hot iron) applied lightly over the course of the nerve; painting tincture of iodin along the nerve; stretching the nerve, either by incision between the trochanter and tuberosity of ischium, and pulling up on the nerve itself, or by first flexing the thigh upon the pelvis, then extending the leg on the thigh while it is in the flexed position. Sometimes nothing but absolute immobilization will relieve.

In diabetic neuralgias, codein ¼ to ½ grain, or morphin ¼ grain. Opium, as it is considered best for the disturbance of the glycogenic function, is always indicated. Lately jambul is much used in diabetes mellitus.

In *anemias* we must use iron in chlorosis, and simple forms; arsenic in leukemia, pernicious anemia, Hodgkin's disease, etc. Phosphorus, dose $\frac{1}{100}$-grain, cod-liver oil, ℥ss. at a dose, hydrotherapy, and outdoor exercise are also indicated.

If local, as anemic headaches, cardiac stimulants, as strychnin $\frac{1}{30}$-grain, digitalin $\frac{1}{100}$-grain, nitroglycerin $\frac{1}{100}$-grain, are indicated.

In pregnancy keep the bowels, kidneys, and stomach in working order, give iron for the anemia usually present, and use the coal-tars in small doses.

In facial neuralgia the following drugs are of great value:

Croton chloral in dose of 5–15 grains, usually 5 grains. Tr. gelsemium, minims 15, repeated to physiological limit. Fl. ext. of tonga in doses of ʒ ss. to ʒ i. repeated in two hours, or kryofin in doses of 8 grains, repeated once in two hours, if necessary. In this and other neuralgic affections the last-mentioned drug is very efficient.

The pain of coccygodynia is very intractable, and usually requires the removal of the coccyx.

Neuralgic headaches from cerebral disease require morphin, if fl. ext. ergot in ʒ i. doses, or fl. ext. tonga in ʒ i. doses fails. Calomel in small doses, about ¼-grain, should be often given, combined with the morphin, or opium.

In neuralgic dysmenorrhea cannabis indica 30 minims of tincture, and viburnum prunifolium ʒ i. of fluid extract, are good.

Taking neuralgias as a whole, we divide our treatment into hygienic, medicinal, dietetic.

Surroundings of patient must be sanitary; fresh air, exercise, and bathing insisted upon.

Medicinally, we treat locally by ointments and washes of aconitin, belladonna, opium, chloral, menthol, alcohol, cocain, eucain, application of heat and cold. Ethyl chlorid, chloroform, ether, and rhigolen sprays, massage, cautery, cataphoresis, hypodermics of strychnin to physiological limits have been used with more or less success. Nerve-stretching, and resection of nerves have been undertaken with success in intractable facial neuralgia.

Internally we use aconitin in doses of $\frac{1}{200}$-grain, usually combined with strychnin sulphate, belladonna, or its alkaloid atropin in dose of $\frac{1}{60}$-grain. Tr. gelsemium in 20-minim doses. Fl. ext. tonga, fl. ext. guarana, bromids, camphor monobromata, chloral butylhydras or croton chloral, and the coal-tars as follows: antipyrin, 5–15 grains, acetanilid grain ii, v, phenacetin, 5–15 grains, salol, 5–20 grains, salophen, 5–25 grains, lactophenin, 5–15 grains, phenocol hydrochlorate 5–30 grains, chloralose, 5–7 grains, exalgin, 2–4 grains, kryofin, 4–8 grains. Exalgin seems to be the most depressing of the above coal-tars, whereas kryofin, phenacetin, and salophen appear to be the best in my experience.

Cocain and morphin should not be used, if they can be possibly avoided, especially in women. They derange the digestive organs and may cause the habit.

IV. *Cutaneous reflex pains* are elicited by touching lightly with the head of a pin, or pinching the skin in the same way. Small areas will be found that burn like fire.

Examples.—Aneurism of the ascending part of arch of aorta may give spots of acute pain above the left clavicle; whereas, if in the transverse portion of the arch, it gives the same down the inner side of left arm. In gastric ulcer, if at cardiac end, there may be a point of tenderness at the function of the ensiform cartilage and sternum, and if at the pyloric end near the seventh rib. In some forms of dyspepsia a point of tenderness is found on the left shoulder.

Stone in the bladder may cause pain at the neck of the penis, or podalgia. Hip disease usually gives pain at the knee.

Treatment consists in removing the cause, and anodynes if very severe. Strontium bromid is good for the stomach pains.

V. *Subjective pains* are supposed to emanate in the mind. Said to be caused by some unknown stimulus of the sensory center, and to be brought on by association of ideas. Hysteria is an instance. The patient usually desires a good deal of sympathy, and makes much of the pain.

Treatment is very unsatisfactory. Rest, massage, galvanism, and hypnotism may be tried, and the following drugs given internally: valerian, and valerianates, zinc phosphid or oxid, bromids, aromatic spirits of ammonia, and placebos. The bowels should be kept open. Anemia treated if present, and the patient should be removed to new surroundings, and beyond the reach of sympathizing friends. This form of pain will undoubtedly test a physician's skill to the utmost.

Etherization has proved of benefit in one case I know of.

It is said that the location of pains in an infant may be diagnosed by its attitude, expression, and cry.

A wrinkled forehead means headache; pinched nostrils thoracic pain; elevation of the upper lip or twitching of the muscles about the mouth means abdominal pain, retracted head with stiff neck, meningitis.

A continuous piercing shriek may point to meningitis, usually tubercular; an interrupted or spasmodic cry points to abdominal pain, as the infant is afraid to move the diaphragm. A continuous cry and rubbing of an ear points to earache. An irritable cry, with more or less salivation and tendency to rub the gums points to teething as the cause, etc., etc.

Before closing, I wish to state that it has been my aim to be as concise as possible in what little has been written about that annoying, and common symptom, pain.

THE RELATION OF THE GENERAL PRACTITIONER TO THE RHINOLOGIST, AND THE TREATMENT OF SOME AFFECTIONS OF THE NOSE AND NASOPHARYNX.

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Read at the Regular Meeting of the Medical Society of the County of Kings, April, 1898.

It is often a surprise to me how few physicians apparently consider the nose in any other way than as an ornamental feature of the human anatomy, leaving out nearly altogether the technic of examination for the purpose of proper diagnosis, and the various methods of treating the numerous diseases of this organ. Only a small proportion own a head-mirror or laryngeal mirrors, nasal specula, and the other paraphernalia necessary to do justice to themselves or the patient. Something is usually lacking. Even if these articles are at command, only a few have had sufficient experience to state the real conditions seen, or to know what to do if they are recognized. In the majority of cases no attempt at ocular inspection is made; but, on the statement of the patient that he has catarrh, the physician prescribes salt and water, or some other solution or powder to be snuffed up. I do not think we shall have to look far for this indifference. I presume the reason for it is that the general practitioner, in treating more or less all diseases, finds it impossible to keep abreast of medical literature, or spare time for practical clinical work, or bear the heavy expense of fitting up an office for special work in these more delicate organs. Every physician should be sufficiently familiar with examination and diseases of the nose to be able, at least, to advise the patient what is necessary, and, if he does not desire to handle the case, he should place him in the hands of those competent. He should also be acquainted with anterior and posterior rhinoscopy, and then a few instruments, and a few months' practice would be all that is required to properly equip one to make a thorough examination of the nose and rhinopharynx. Hypertrophied or atrophied turbinateds, deflected septum, exostosis, polypi, enchondromata, adenoids, ulcers, erosions, epistaxis, etc., could be recognized and referred to the laryngologist and rhi-

nologist, who, after the necessary surgical interference, could send the patient back to his regular physician for further treatment, if it were his desire. Some doctors might imagine that by so doing the confidence of the patient would be lost or lessened; but this would never be the case if a candid and honest examination were given, and his exact position stated in regard to such services.

I know in my experience I have had many clients who have heartily thanked their doctors for sending them to me, and others have censured their physicians for subjecting them to a long and unsuccessful course of treatment, and afterward falling into the hands of a specialist who gave them quick relief. You may readily understand how a family physician may be injured by pursuing such a method, although perfectly honest in his intentions, though on direct interrogation he would sometimes find it difficult to make a satisfactory explanation. Some may think this an exaggeration of the facts, but I believe if I were to ask the question, how many physicians make a thorough anterior and posterior rhinoscopic examination in patients applying to them for nasal treatment either for direct or reflex disturbances, the answer would be almost universally negative.

We must not forget that the nose is to breathe through, and, when normal, to warm, moisten, and purify the atmosphere before being carried further into the respiratory apparatus; and in all cases of asthma, hay-fever, deafness, chronic cough, etc., a most careful inspection of the nasal passages must be made.

I will now in succession refer to some nasal affections in a cursory manner.

Acute Rhinitis is one of the most frequent nasal affections to which our attention is called, and the treatment is not often very successful. All are aware of the usual symptoms—chilliness, headache, and a stuffy feeling in the nose followed by a watery, irritating fluid from the nostrils, and often severe sneezing. It is quite important that it be quickly controlled, or we may find that it has run into bronchitis, asthma, or something else even more difficult to manage. Treatment may be undertaken at the very commencement of the attack, or else it may run a long course. If debility or constipation exist, each must be carefully looked after. I find for internal medication, the following quite effectual:

A tablet containing phenacetin and salol each 2½ grains, and quinia sulphate ¼ grain; one tablet to be taken every two hours until six are taken; and supplemented by atropin sulphate $\frac{1}{100}$-grain, dissolved in 4 ounces water; a teaspoonful to be taken

every ten minutes the first hour, and half-hourly thereafter until the ʒ2 doses have been taken; or tincture of aconite and belladonna may be given. Locally, inhalations of menthol or insufflations of the following powder:

℞—Camphor, } aa . . grs. xxx-lx
Bismuth subnitrate, }
Pulv. acaciæ . . . . . gr. xxx
M. Et. Sig. To be used every two hours till relief is obtained.

Contracting the tissues with cocain or antipyrin, and then blowing in aristol will give considerable relief, or pinning them down with chromic acid fused on a probe or with the galvanocautery.

Hypertrophic Rhinitis constitutes a thickening of the nasal mucous membrane, and is probably brought about by repeated attacks of acute rhinitis and the improper treatment of this affection by the use of irritating snuffs, or strong astringents such as nitrate of silver, and forcible spraying. I doubt if it ever arises idiopathically. The favorite seat of hypertrophic rhinitis is the turbinated bodies (inferior and middle), but it is also found on the septum and floor of nares, their peculiar anatomical structure favoring the production of redundant tissue.

The turbinated bodies consist of bone covered with mucous membrane and epithelium, which latter is quite elastic and richly supplied with blood-vessels, particularly veins. They have erectile qualities, and the tissues become erect when distended with blood and shrunken after being emptied. The repeated abnormal distention of these from any irritant cause will gradually produce a thickening of the walls of these minute venous sinuses, thus causing the loss of their elasticity. Hyperplasia of the connective mucous tissue takes place. and the net-work of minute venous sinuses remains distended. This same pathological condition applies as well to the septum and floor of nares, but in a much lesser degree. The hypertrophy is unequally distributed over the mucous surfaces, being much greater in some places than in others. These changes progress slowly, but in time will produce more or less occlusion, and occasionally complete stenosis of one or both nasal passages. Therefore, we should promptly treat any acute or chronic rhinitis before hypertrophy begins, and thereby prevent it.

What chiefly brings these people to the physician is their inability to breathe through the nose, the erectile tissue not having

collapsed as readily or as thoroughly as it should. At this stage the physiological functions of the nose are greatly interfered with and lose their power to warm, moisten, and purify the respired air; and this is the usual starting-point of pharyngeal and laryngeal affections, and often pulmonary as well. The patient becomes a mouth-breather, and the face exhibits an appearance of stupidity. The lacrimal ducts and Eustachian tubes may be interfered with, thus producing eye and ear trouble. The sense of smell is often impaired or wholly destroyed from pressure of middle turbinated, etc., although respiration may be good through lower part of nose. Headaches are frequent, and pain or a feeling of pressure over the bridge of the nose exists.

A rare occurrence from nasal obstruction is a red nose, which is quickly relieved by removing the crowding between the walls of turbinateds and septum. Nasal secretion is excessive, and may be simply mucous, or mucopurulent in character, with a peculiarly disagreeable odor, making the breath unpleasant. The increased secretions cannot find sufficient outlet by the anterior nares and run down over the pharyngeal wall, causing irritation and a continuous hawking in an effort to clear the throat. This mucopurulent matter running into the larynx will produce chronic laryngitis, and in the esophagus a burning sensation, and in the stomach often severe gastric disturbance. Only temporary relief may here be given as long as there is nasal obstruction; hence, a popular idea that post-nasal catarrh cannot be cured.

There are also bony and cartilaginous spurs of septum and deviations. Polypi, adenoid vegetations in vault of pharynx, and many other conditions occur, all of which must be most carefully looked after.

The above enumerated nasal affections are frequently the cause of bronchial trouble, emphysema of lungs, asthma, hay-fever, etc. I believe it is rare to-day to find a physician who does not believe in the nasal origin of asthma, and this fact has often been clearly demonstrated by the proper treatment of the nose, by surgical interference, and otherwise. The results of treatment for asthma may be divided into three classes: first, no improvement; second, mitigation of symptoms; third, complete cure.

Aprosexia, or inability to fix the attention, is often due to nasal disease, principally to obstruction by adenoids in the pharyngeal vault; and this is also frequently the cause of incontinence of urine.

All the above-mentioned conditions must be thoroughly treated, either surgically or by local or internal medication. In nasal drug therapy I have but little confidence as curative, except as regards antiseptic cleansing agents; but, it is marvelous how much may be done for the suffering by skilful application of our knowledge. We can hardly conceive that the nose may be responsible for so much, and it is only after years of investigation that it has been positively demonstrated. Deviated septums must be straightened, spurs removed, turbinateds reduced or removed as indicated by the various means at command; adenoids eradicated by forceps, curette, and finger; and the nose kept thoroughly cleansed by some antiseptic solution. Patients should be seen at least every other day, parts inspected and looked after, and the patient at home must be impressed with the necessity of cleansing the parts at least twice daily.

It is difficult for those who have not had considerable experience in rhinology to conceive how, as if by magic, so much may be accomplished by nasal treatment. All the following may be improved or cured:

Impaired hearing, tinnitus, otorrhea, post-nasal catarrh, difficult breathing, headaches, aprosexia, sneezing, epistaxis, asthma, hay-fever, incontinence of urine, and many forms of neurosis.

By working hand in hand harmoniously the general practitioner and the specialist may be of incalculable benefit to each other in our noble profession.

215 Jefferson Avenue.

THE IMPORTANCE OF RECTAL EXAMINATION IN DOUBTFUL CASES OF APPENDICITIS.

BY H. BEECKMAN DELATOUR, M.D.,
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In the diagnosis of acute and subacute appendicitis the most superficial examination is frequently sufficient to enable one to make a correct diagnosis, while in many cases the most extensive and painstaking search fails to completely clear the way to an absolute diagnosis. While the history and palpation of the abdomen in the majority of cases make the existing condition plain, it is not so when the appendix is situated below the brim of the true pelvis and the abscess forms, in the male, between the bladder and the rectum; or, in the female, between the uterus and

the rectum. In these cases the point of tenderness is frequently absent, the rigidity of the rectus muscle absent or else present to a moderate degree on both sides, no tumor is appreciable and still the pain and the temperature with the rapid pulse point to an active process going on in the region of the appendix.

It is in these cases that the importance of a rectal examination should be appreciated. It has been our fortune, during the past year, to examine a number of such cases, the histories of some of which we will present this evening.

Case I.—Female, aged about forty-five, complained of severe pain in the lower abdomen, gave no history of uterine or ovarian disease, but gave a history of several mild attacks of appendicitis, the last attack beginning about four weeks before the date of operation. Examination at the time of our first visit showed a temperature of 104° F.; there had been repeated chills; pulse, 140; abdomen not distended; some tenderness over the lower portion of the abdomen, and this somewhat more marked at the normal site of the appendix. There was complaint of a sense of fulness about the rectum and pain on sitting down. Rectal examination revealed a fluctuating tumor situated between the uterus and the rectum and invading the rectovaginal septum. Under anesthesia an incision was made in the right ischiorectal fossa and the dissection carried up along the rectal wall for two inches, when the abscess cavity was reached and fully one quart of fetid pus evacuated. The patient made a good, although somewhat protracted, recovery. This was a case of appendicitis with the abscess situated entirely in the pelvis, and burrowing its way down between the vagina and the rectum. The patient was suffering from a severe form of sepsis and probably would have died before the abscess could have ruptured spontaneously.

Case II.—A boy of sixteen had an attack of appendicitis from which he had apparently recovered, but two days after he began to go about he began to have pain, and the temperature rose to 103° F., and the pulse to 120. The next day the condition was about the same. He was seen in consultation at this time, and an examination made with the following findings: Temperature, 103° F.; pulse, 120; slight abdominal pain, and some tenderness over the lower abdomen; no tumor could be felt from the abdominal surface. Rectal examination showed a fluctuating mass occupying the space between the bladder and the rectum. In this case an abdominal incision was made and deep in the pelvis an abscess cavity was opened and from this eight or ten ounces of

foul-smelling pus were evacuated. The appendix formed part of the outer wall of the cavity and could not be removed without endangering the life of the patient. The cavity was drained and the boy made a good recovery. Secondary operation for the removal of the appendix was advised but not accepted.

Case III.—Male, twenty-one; had been suffering with abdominal pains and cramps for three weeks, but had continued about his work until two days before being examined by us. At this examination we found the patient extremely emaciated; pulse, 140, and very feeble; temperature, 102° F.; abdomen not at all distended, but there was extreme tenderness over the hypogastric region.

Rectal examination revealed a mass bulging into it from above. This mass was exceedingly tender but no fluctuation could be discovered. On opening the abdomen the pelvis was found to contain a mass of intestines firmly bound together by adhesions. These were carefully broken down and an abscess evacuated of about six ounces of pus. Free in the cavity was the gangrenous appendix, which was removed. Adequate drainage was provided and the abdominal wound partly closed. The patient did not react well and died on the fourth day of exhaustion.

An interesting point in connection with these cases is that the patients were not confined to bed during the entire progress of the disease. The first case was able to be about until a week before operation; the second had been in bed, but was considered well enough to be about two days previous to operation, although the pus must have been present at the time. In the third case the patient was about for nearly three weeks while an attack of inflammation of the appendix, sufficiently severe to destroy it, was in progress.

Case IV.—At this time it may be well to relate another case which seems to belong to this class. Male, aged fourteen, had an attack of appendicitis of a week's duration from which he had apparently entirely recovered. He had been about the house for three days and then went out on the street. He sat on the curb watching a game of ball, when the ball rolled his way and he picked it up and threw it. Immediately he was seized with severe abdominal pain and in a few minutes was in complete collapse. A few hours later the case was seen in consultation with the family physician and diagnosed as one of pelvic abscess due to appendicitis. The abscess had been shut off by adhesions and these were ruptured by the effort made in throwing the ball. The

case was a desperate one and operation was not advised, but on the urgent request of father and mother the abdomen was opened and thoroughly cleansed. A large quantity of pus was evacuated. The boy never rallied, but died two hours later. Had a rectal examination been made before this boy was allowed up it seems sure that this abscess would have been discovered.

Case V.—Seen in consultation with Dr. A. H. Bogart. Male, twenty-one, had been sick for four days with symptoms resembling appendicitis, but without the characteristic point tenderness and rigidity of the rectus muscle. In this case movement of the bowels was accompanied by severe pain. Examination of the abdomen failed to reveal any tumor, but rectal examination plainly showed the existence of an intra-abdominal pelvic abscess. At operation the abscess was found entirely within the pelvis, with the appendix forming part of its wall. The case made a good recovery.

Case VI.—Male, twenty-one. Had an attack of appendicitis of one week's duration. At the end of this time the tenderness was much diminished, no abdominal tumor was apparent, but the temperature was a little higher each day, and on the day previous to consultation a chill occurred. On examination, the temperature was 103° F.; pulse, 100; some tenderness in right iliac region, but no tumor could be made out, although there was a sense of resistance. On rectal examination a mass projecting from above could be felt in the anterior rectal wall. By bimanual examination fluctuation could be distinctly made out. Operation (through the abdominal incision) evacuated the abscess and in the pus was found the remains of the appendix, which had completely sloughed off. This case made a complete recovery.

These six cases, with three others, the histories of which we will not weary you with, have all been seen during the past twelve months and form a part of a series of sixty-three cases operated on during that time. From this we may say that about sixteen per cent. of our cases were of this character. To those practitioners who believe in waiting for a tumor to form before recommending operation we would respectfully present these cases, in the hope that they may be led to look for the tumors at other points than in the right iliac region.

We would also again emphasize the possibilities of abscess existing without grave symptoms being present until the time of rupture.

DISCUSSION.

Dr. Delatour: In connection with this subject I would like to present what probably is familiar to the Society—the new finger-cots that are being manufactured by some of the instrument-makers. This [exhibiting] is one of Tiemann's make, which is very thin, easily slips on to the finger, and protects the finger in making an examination without in any sense destroying the sensibility. They are very cheap—50 cents a dozen—and in making rectal examinations and also in vaginal examinations I have found them of great service.

Dr. George McNaughton: I would like to relate a clinical history in confirmation of Dr. Delatour's paper. A patient who had undoubted appendicitis and was told so but failed to believe the fact, made a trip to Chicago; when he came back just such a tumor as the doctor describes was found, and easily mapped out: it could be felt in the rectum, and appeared above the brim; still he did not consider himself very ill and made a trip to Flint, Michigan, came back, and then concluded to have an operation done, which resulted in his death in three or four days. I have also seen this occur in women. Recently I have had a case in which the wound, after an appendicitis operation, united nicely and everything appeared all right, but the patient continued to have some temperature and on examination of the rectum and vagina a mass was found, which was opened by the side of the rectum; she made a very excellent recovery. This was a post-operative abscess.

Dr. Walter B. Chase: The interesting paper of Dr. Delatour gives emphasis to the fact that what are suppposed to be the typical signs of appendicitis are not by any means always present. I think it is the experience of surgeons generally that, other things being equal, in proportion to the early time of the operation the likelihood increases of saving the patient. These nearly all were cases which were seen at a period subsequent to the attack, and some had been recurrent cases, and yet the symptoms of themselves, so far as local tenderness was concerned, were entirely insufficient on which to formulate a positive diagnosis; but the method adopted by the doctor gives us light where there is doubt, and it behooves us all in cases of that kind and in cases of intrapelvic abscess, to exhaust every possible source of making a diagnosis by exclusion, by going over that very portion of the pelvic cavity as far as it may be possible; and in so doing valuable information will be obtained and lives will be saved which will be otherwise sacrificed.

ANESTHETIC MIXTURES IN GENERAL ANESTHESIA; WITH SPECIAL REFERENCE TO THE SCHLEICH MIXTURES.

BY RICHARD W. WESTBROOK, M.D.,
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Read before the Brooklyn Surgical Society, April 7, 1898.

The constant advance in recent surgical technic is reducing more and more the mortality risk to patients in operative procedures. One factor in such procedures, however, can hardly be said to have kept pace with the rest, namely, the production of general anesthesia. In this country, at least, proper anesthetization of the patient has never been given its due importance as a factor likely to greatly influence the outcome of the operation.

In hospitals, the youngest and least experienced member of the house-staff, with no previous practical instruction, is usually allowed to go ahead as he pleases with the ether or chloroform. In private practice, the family physician, often a man who knows little of practical anesthetics, is made use of, as a matter of convenience or policy, or the first man near at hand is employed to give the anesthetic. Such practice results in much annoyance to the operator, dividing his attention and prolonging his work, and not rarely, I am sure, carrying the patient far beyond the danger-point of his recuperative powers. I suppose our somewhat blind confidence in the safety of ether is responsible for much of this; but no general anesthetic at present known is safe in unskilled hands. Ether does not often kill the patient on the table, but not a few times have I seen death result from a pneumonia, or from added shock, due to its careless or immoderate use, where a proper selection and administration of the anesthetic, I feel sure, would have averted a fatal result. No mention is made in the records of the true cause of death in such cases.

But while it is very probable that a majority of the deaths, directly or indirectly, from anesthetics are unrecognized or unrecorded, and due to bad administration, it is not to be denied that a certain percentage of danger lies in the anesthetic itself. One death from chloroform occurs in every 2000 to 3000 administrations in able hands, and one death in every 10,000 to 15,000,

from ether. Although nitrous-oxid has been suggested for use in continued operations, in its present stage of development it has not found favor with many, and we are limited, therefore, to a choice between ether and chloroform in most cases.

Considering certain unavoidable dangers of ether and chloroform in skilled hands, and their manifold dangers in unskilled hands, it is of great importance to investigate any suggestion which promises a safer anesthetic for common use. Several other anesthetic agents have risen into prominence at times, but all have proved disappointing, and the original anesthetics, ether and chloroform, still hold sway. It was natural, therefore, that mixtures of these two agents, together and with other substances, should be devised with the hope of thereby counteracting objectionable qualities, and adding desirable ones. These mixtures have been widely used in Great Britain and on the Continent, but have been quite generally condemned here. The great objection to them is that, being simply mechanical mixtures, their ingredients evaporate at different rates, the most volatile first and the less volatile remaining over to be respired after the first has disappeared. This objection may be overcome, however, to a great extent, by using such proportions of the different ingredients as will evaporate in the same length of time at the same temperature. That anesthetic mixtures are employed with excellent practical results by well-known anesthetists is a sufficient reason to allow of their recognition and careful study. Poor results are no doubt often due to imperfect methods of administration, and their use in improperly selected cases. These mixtures should be administered in small quantities, frequently repeated, allowing, as far as possible, one dose to evaporate before adding another. It must always be borne in mind, too, that these mixtures are capable of producing mixed effects, depending upon the physiological actions of their ingredients, and that precautions necessary in the administration of the separate ingredients must be observed in their use in mixtures.

One of the earliest mixtures suggested was made up of equal parts of chloroform and alcohol, and probably amounted simply to a diluted chloroform, making a mild vapor applicable to young children and feeble adults. The alcohol added a little stimulant effect to the mixture, but its chief value was to dilute and restrain the evaporation of the chloroform. Mixtures of chloroform diluted with one-fourth to one-fifth of alcohol have also been used

with success in proper cases, producing a better heart-action than chloroform alone.

Mixtures of chloroform and ether, in varying proportions, have been considerably used. Those containing one part chloroform and from four to six parts of ether are still used abroad. They are very similar to ether in their action, the anesthetic effect of the ether being hastened and sustained by the chloroform in the mixture. A famous mixture consisting of one part chloroform and three of ether is known as the "Vienna mixture," and is much used in Germany and Austria. The published statistics of chloroform and ether mixtures show that they are much safer than chloroform alone, one death occurring in about 7600 cases. A mixture of one part chloroform to but two of ether has also been much used, and has recently been administered to some extent in New York. It has given satisfaction, but must be used with due precaution, as it parts with its ether rapidly and its chloroform more slowly. All chloroform and ether mixtures should be administered on inhalers allowing free entrance of air, and the greater the proportion of chloroform, the more should the method of inhalation resemble that of chloroform.

A third group of mixtures in frequent use is composed of chloroform, ether, and alcohol. Billroth's mixture has been much used by Continental surgeons and consists of chloroform three parts, ether one part, and absolute alcohol one part. It is said to be rarely followed by vomiting. But the best known of all the anesthetic mixtures to us is the "A. C. E." of the British surgeons, consisting of one part alcohol, two parts chloroform, and three parts ether. Its vapor is said to be the most agreeable of all the anesthetic vapors. The objection made to it, in common with all mixtures, that its elements evaporate with varying degrees of rapidity is said to be chiefly theoretical and not noticeable in practice. Its proportions are so adjusted that it shall volatilize uniformly, and Hewitt is of the opinion that some chemical change, of which we are at present in ignorance, takes place when the ingredients are mixed, as perceptible heat is given off. The mixture is also fairly stable, but it is, nevertheless, advised to have it freshly prepared, and kept in small bottles. This mixture would seem worthy a place among the number of anesthetic agents which the skilful anesthetist should always have at his command. It should be regarded as diluted chloroform, and administered as chloroform. The stage of excitement is no greater, and probably less, than that of chloroform, there is not

much mucus or saliva produced, and the pulse is fuller and quicker than the chloroform pulse, and less liable to become seriously depressed. In those cases where ether is contraindicated, and where chloroform might also do harm, the A. C. E. mixture might well be chosen; as in old people whose chests have become rigid, and will not respond to the respiratory demands of ether; or patients suffering from constricted air-way, as in goiter or septic conditions of the neck; or in cases of bronchial or pulmonary trouble complicated with weak heart. Very fat people and alcoholics are said to take the A. C. E. well, but more time must be allowed to anesthetize the latter. I have seen this mixture well administered lately on a small-sized Allis inhaler. The after effects are in most cases slight. As a preliminary to the administration of ether, it relieves the patient of much of the irritation and sense of suffocation caused by that agent when used to commence with.

Several years ago Dr. Schleich of Berlin attempted a scientific explanation of the greater safety residing in anesthetics in mixtures, and also suggested new mixtures which should produce certain definite results. Schleich's mixtures have been quite recently used in a number of New York hospitals with varying success, having brought forth enthusiastic praise from some quarters and indifference or condemnation from others. It has been the main object of this paper to investigate these results, with the view of assisting the members of the Society toward a conclusion as to whether the mixtures are safe and worthy of an extended trial.

Dr. Schleich holds that the prime requisite of a safe anesthetic is that it shall be rapidly eliminated from the body, and that if the anesthetic agent have a boiling-point (or point of maximum evaporation) of the same temperature as the body, only a moderate amount of the anesthetic is absorbed into the blood, and the lungs alone are capable of attending to its elimination, *i.e.*, as much will be exhaled during expiration as was inhaled during inspiration. Therefore, according to Schleich, deep, persisting narcosis will not occur with an anesthetic having a boiling-point of the same temperature as the body. If the anesthetic have a boiling-point higher than the temperature of the body, less of it is eliminated in expiration than is taken into the lungs in inspiration, and the work of its elimination must come upon the kidneys and other viscera also. Chloroform has the high boiling-point of 149° F., and it may readily be seen why less of it is nec-

essary to narcotize than of ether, which has a lower boiling-point than the body (93° F.), and is eliminated with far greater rapidity. The same principles hold true, also, for the various other anesthetics.

Schleich shows that the greater safety over chloroform of the various anesthetic mixtures we have previously considered lies in the fact that their originators, in making up such mixtures, unconsciously lowered the boiling-points nearer to the average temperature of the body. The point of maximum evaporation of the A. C. E. mixture is about 119° F., some 30° lower than that of chloroform alone.

After experiments on the lower animals, both cold- and warm-blooded, Schleich proclaimed that with a certain mixture of anesthetics, he could change the boiling-point at will by varying the proportions of the constituents of the mixture, and thus adapt the maximum evaporation of his anesthetic to the temperature of the subject to be narcotized. The result was exactly the same, also, in the human subject as in the lower animals. Moreover, it was claimed that the mixture used was quite different in its effects from other mixtures and essentially a new anesthetic.

Schleich's mixtures are composed of chloroform, sulphuric ether, and the so-called petroleum ether. Petroleum ether is not an ether in the chemical sense, but a mixture of hydrocarbons obtained in the distillation of petroleum,—it is simply a benzine, with a boiling-point varying between 140° and 148° F. Benzine has long been known as being capable of producing general anesthesia when administered in the form of vapor.

Schleich has suggested the use of three mixtures, the first having a boiling-point of 100.4° F., the temperature within the lungs, and consisting of petroleum ether one part, chloroform three parts, and sulphuric ether twelve parts. This mixture is applicable to short operations, the patient being supposed to regain conciousness almost immediately on stopping its administration. For longer operations, Mixture No. II., having a boiling-point of 104° F. may be used. This mixture contains two parts less of sulphuric ether. A third mixture, boiling at about 107° F., consists of petroleum ether one part, chloroform two parts, and sulphuric ether five and one-third parts.

The objection has been raised that these mixtures can have no constant boiling-point, any more than other mechanical mixtures. Experiments made by Squibb go to show that only a small portion of the liquid remaining in the flask, after the rest has dis-

tilled over at varying temperatures, seems to show a stable nature and fixed boiling-point. On the other hand, Dr. Willy Meyer has claimed (*N. Y. Medical Record*, March 5, 1898) that the components of Schleich's mixtures are in true chemical combination, except a portion of the sulphuric ether, which remains free in the mixtures, and varies in volume from fifty-three per cent. in Mixture I. to thirty-six per cent. in Mixture III. He also claims to have perfected solutions in which there is no free ether whatsoever, the chloroform and ether being in "molecular combination," and the details of which he will announce shortly.

It is impossible that these mixtures can be more than approximately adapted to the temperature of the body, which in itself will vary during the course of the operation. Under the prolonged administration of an anesthetic the body temperature is lowered, falling as much as 4° F. under ether.

The claims put forth for the Schleich mixtures are that they are safer than other anesthetics, that the patient is anesthetized quickly, and that he recovers full consciousness very rapidly indeed after the administration is finished. Also, that excitement is very rare during induction of the anesthesia, that there is rarely accumulation of mucus, and never cyanosis. The pulse is full and regular during full anesthesia, and the respiration is not impaired. There is less vomiting after this than with other anesthetics, and no consecutive bronchitis or pneumonia. More than one-half of Schleich's patients walked home after being anesthetized. Albuminuria occurs in a very small percentage of cases. On the whole, the narcosis is similar to that of chloroform, but without its disadvantages. No case of death from these mixtures has yet been reported.

The objections which have already been put forth against the new anesthetic are that it is no better nor safer than other mixtures of chloroform and ether, that the odor of petroleum ether is disagreeable to patients and apt to excite disgust and vomiting, and that too many cases of chloroform poisoning and persistent, late vomiting have already been reported to warrant its further use.

In collecting the evidence for and against the new anesthetic I have procured information covering some 1400 administrations of it in this city. In the largest single series of cases, some 600, the mixture was considered a good one, and is still continued as routine practice. It was found to have the advantages of both ether and chloroform, but also some of their disadvantages. No

bad results had occurred, but patients would at time become cyanosed, and would also secrete mucus. The mixture required as much care in administration as any other. Its chief advantage seemed to be the markedly quick return to consciousness after the administration. As an inhaler, an Esmarch mask was used, covered with two layers of flannel with a thin layer of absorbent cotton between.

In a series of 100 cases, three instances of collapse under the anesthetic had occurred, but the operator was still persisting in its use. A similar mask, but covered with a layer of oiled-muslin over all, in which were two small openings for entrance of the mixture, was the inhaler used.

In a series of fifty cases, three instances of unusually severe vomiting, persisting several days, had occurred, which were attributed to the anesthetic for want of any other explanation. A paper-and-towel cone was the inhaler used. The anesthetic was discarded as having no advantages over chloroform.

In a series of ten cases, one bad case of chloroform-poisoning occurred, and the anesthetic was discontinued. A closed inhaler had been used, however, which is not proper for any mixture containing chloroform.

A case of alarming collapse in a trivial operation (circumcision) has been reported within a week in the *N. Y. Medical Record.*

In a series of 150 cases, the anesthetic had been unsatisfactory at first, but with increased experience in its administration, it had gained in favor. Patients had succumbed and recovered readily from the mixture, and only about twenty-five per cent., the house-surgeon thought, had vomited afterward. The Allis inhaler, covered in at the top during the administration, had been given the preference.

A series of 100 cases reported by Dr. Willy Meyer in December last showed excellent results.

A series of fifty administrations of the mixture in Brooklyn have given satisfactory results, the Allis inhaler being used. A series of fifty-four cases, published within a week in the *N. Y. Medical Record*, gave good results.

Altogether, a considerable number of surgeons have already used the mixtures. My own observations of the administration of the Schleich mixtures, combined with those received from others, have been as follows:

The mixture is not disagreeable as compared with ether or

chloroform. It takes an average of ten minutes to anesthetize a patient. Mixture III. is the one preferred for common use, containing a rather larger proportion of petroleum ether, although Mixture II. is much used. Mixture I. is preferred for children.

There is little or no stage of excitement, and consequently little secretion of mucus, which occurs chiefly during the stage of excitement in ordinary anesthesia, the secretions ceasing during deep narcosis. Cyanosis and rigidity are rare, although I have seen a peculiar rigidity and embarrassed respiration occur in two consecutive cases on commencing to come out of the anesthetic. The patient comes out of the anesthetic more readily than from chloroform or ether. Vomiting in coming out is not uncommon, perhaps about as often as after chloroform. It does not have much irritant effect upon the lungs, although one case of bronchopneumonia has been reported. The amount used in ordinary operations averages from three to six ounces. It is at times impossible to completely anesthetize alcoholics and some hysterical individuals, and a preliminary hypodermic injection of morphin has been found necessary.

My own conclusion regarding the anesthetic is that it is a good mixture, and should be given an extended trial. That it is an ideal anesthetic, adapted to use in any case, and in any hands, is not true. There seems to be something about the mixture, however, which makes it different from other anesthetics, and further investigation may find it an important advance in our knowledge regarding anesthetics. The adaptation of the boiling-point of the mixture to the temperature of the body seems rational, and may account for the rapid coming out of the patient after the anesthetic; but I think it is a common experience with all of us, that, after the proper administration of chloroform, the patient recovers consciousness much more quickly than after ether. The reverse should be expected from the fact of the far higher boiling-point of chloroform. There may be also an added stimulant effect to the ether from the benzine, as I have seen the patient's color remain excellent during the administration of the mixture. I noticed this especially in a case of goiter operated on recently, where the woman had been having marked respiratory pressure symptoms. Such cases often take the anesthetic badly, but Schleich's Mixture No. III. worked well here. If there is an actual new chemical combination formed, it may be that in this its

virtue resides. The mixture is said to keep indefinitely if tightly corked in brown glass bottles.

Schleich has taught his principle regarding the boiling-point in general anesthetics for at least four or five years, and in his work on "Painless Operations" published in 1894, recommends various mixtures very similar to his present ones. His present mixtures have been used by him for a year or two, but have attracted very little attention in Germany—at least, almost no mention is made of them in German literature. However it may be considered in Germany as still too early to draw conclusions regarding the mixtures, and it is certainly far too early for us to draw final conclusions from their use thus far in New York. They should be used in thousands of cases before final judgment is passed upon them.

After all, it is a question as to whether it has not been the unusual care taken in the administration of the new anesthetic which has produced much of the good result obtained with it. At one hospital, the A. C. E. mixture has been used side by side with the Schleich mixtures, with the same inhaler and the same precautions, and thus far is said to have given equally good results. If the Schleich mixtures have done nothing more than emphasize anew to us the importance of the proper choice and administration of our anesthetics, and to direct our attention beyond indifferent routine ether-giving, they have accomplished great good. Probably more interest in anesthetics has been aroused in New York this winter than for a long time past. Closed methods of ether-inhalation have been investigated, and have given excellent results. The Ormsby closed inhaler, preceded by laughing-gas, has been demonstrated to be a most agreeable and safe method of etherization. The patient is rapidly rendered unconscious, experiences none of the horrors of the ether, presents little or no stage of excitement, has no salivation, and above all, takes a very small quantity of the ether. I venture to predict that this will become a much used method in this city in the future, for most signs still point to ether as the common anesthetic of the future. We have been accustomed to ignore closed methods of inhalation, although they have long been advocated by eminent anesthetists in England, where the subject of practical anesthetics is given more attention than anywhere else in the world. There is a difference between practical and theoretical anesthesia, and between laboratory demonstrations and the actual anesthetizing of the individual presented

to undergo a severe operation. Hewitt, of London, one of the most eminent anesthetists of the present time, has lately stated that experience has shown that more depends on what he terms the "type" of the patient than upon the state of his heart or lungs. In healthy patients of different types, a totally different set of phenomena may result, although the anesthetic may be administered in exactly the same way. It is the robust, healthy man, with the strong heart action, the subject of some trivial operation, who more often is killed by chloroform than the patient of opposite type. When we adopt the English plan of employing an official anesthetist in our hospitals, who shall determine the anesthetic to be given and administer it in important operations, and who shall instruct the internes and have an oversight of their anesthetic-giving—then we shall be doing greater justice to our patients and to Surgery. But we must go farther than this. All graduates in medicine cannot serve terms in hospitals, and, therefore, systematic instruction in practical anesthetics should be given in our colleges. I can see no reason, now that medical courses have been lengthened to four years, why the subject should be further neglected. The senior students might just as well be taken individually or in sections, and instructed in the giving of anesthetics, as they now are in practical obstetrics and other specialties. Colleges should be in close enough touch with hospitals and dispensaries to admit of this.

We need a few specialists in anesthetics in America. But we are not alone in our needs, for the recently published statistics of Professor Gurlt to the German Surgical Society, show that the abuse of chloroform and ether is widespread in Germany. In that country, the deaths from chloroform have increased from 1 in 2700 in 1891, to 1 in 1126 in 1897. The mortality from ether has decreased somewhat in the same period, but, unless German figures are more honest than ours, is still far too high, 1 in 6700. A physician, lately returned from Germany, told me that he witnessed two deaths from chloroform during a short attendance upon one clinic.

Such statistics are a reproach to present-day surgery. Although the *Index Medicus* is under the necessity of devoting a separate section to "Accidents of Anesthesia," so many are published, still one cannot but suspect that published statistics fall far short of the actual number of mishaps. I have personally learned of several deaths directly from anesthetics, but never saw them published. It was mentioned incidentally in the *N. Y.*

Medical Record of last year that three deaths during anesthesia had occurred in nine months in a single New York hospital, two from chloroform and one from ether.

Contrast with our present statistics those published years ago showing but one death out of 17,000 cases chloroformed in eight English hospitals between 1848 and 1864! While it is hard to believe these figures absolutely correct, it is undoubtedly true, that in our enthusiastic endeavors to secure more and more rigid asepsis in our operations, we have allowed another very vital factor to fall into neglect.

That we have seen an advance toward our much-needed anesthetic reform in New York in the past few months is evidenced by the fact that the trustees of the Hospital for Ruptured and Crippled have regularly appointed an anesthetist to the institution, who visits the hospital beforehand to determine the proper anesthetic in each case, administers it himself in the more important cases, and instructs the house-staff. The New York Hospital has also recently retained the services of the same gentleman.

In our consideration of the subject of mixed anesthetics, I think we must admit that they have a place in the surgery of today. But that any mixture of our present anesthetics is likely to result in an "ideal" anesthetic to the abolishing of all other agents, is very unlikely. Dr. Willy Meyer has promised us some important developments along the line of the Schleich mixtures, and we may hope that they will prove of great benefit to humanity. But after all, it is the safe anesthetic in the hands of the safe man that is the condition to be desired, and such a man will never fail to realize that "Anesthesia always means a step toward death."

DISCUSSION.

Dr. W. A. Tomes said that he had used Schleich's solution in two cases—using No. III. in the case of amputation of the breast on a patient sixty-four years of age. The patient went under the anesthetic very easily and as soon as the operation was over the patient was practically out of the anesthesia without vomiting or untoward symptoms.

Another case in which he used it was a case of hysterectomy, and in that case the patient kept up the vomiting for three days. The anesthetic was given by the family physician who did not understand its administration. The way this new anesthetic should be given, according to Dr. Meyer, is in drop doses. The inhaler should be lined with oiled muslin externally.

Dr. A. M. Judd said that he had the opportunity of assisting a

gentleman in an operation where the anesthetic No. III. was given by the gentleman who gives it now in the Hospital for Ruptured and Crippled. The patient went under the anesthetic very readily, and, it was very satisfactory indeed. There were no unpleasant symptoms whatever; though the case was a very bad one to administer an anesthetic to.

Dr. A. T. Bristow said that he had hoped there would be some further reports in regard to this method. His own experience with it he said had been somewhat limited; but still he seemed to have had more cases than had been reported to-night, although he had had but six. The character of the anesthesia in those cases was exactly that described by Dr. Westbrook.

He used anesthetic Mixture No. I. to get the patient started and then continued with No. III. All those cases were at the County Hospital, mostly alcoholics who take ether badly and are frequently a long time going under the anesthetic. Most of these cases went under in less than five minutes, and were out of the anesthetic with great rapidity. They were reported as being out by the time they got back to the ward. There was one case, that of a man who was an alcoholic, who took about ten minutes. Dr. Bristow said that he had no doubt but that he should have had the greatest trouble with this case under ether, as under this mixture the patient became red in the face. It was an operation for hernia, and he recovered rapidly.

Dr. J. B. Bogart said that this seemed to be a proper time to consider the appointment of a regular anesthetist at the hospital. The fact that the New York Hospital has done this has certainly attracted attention, and it might be a good thing for us to consider that feature of the paper.

Dr. R. W. Westbrook said that he had only to say in closing the discussion that he had received a good many other reports such as Dr. Bristow and Dr. Tomes had given, but they had all been negative, some pleased and some displeased, and some both pleased and displeased. In regard to the care with which anesthetics should be given he would like to mention that he thinks the anesthetist should continue to look after the patient's condition after the operation. Yesterday in the Brooklyn Hospital in order to determine just how far a patient's temperature would fall after an ether inhalation, he took the temperature of the rectum and axilla of a woman who had been under the anesthetic one hour in a simple operation, and found the temperature several degrees subnormal. He found that the patient's temperature

three hours after leaving the operating-room was 96° F. The patient is doing very well now. He thinks that the great fall in temperature is due not only to the inhalation of ether, but also to the exposure of the patients so much practised in operating-rooms, and the washing of the patients with solutions which evaporate rapidly. These things he believes have something to do with the pneumonia of patients after operation. He thinks the keeping the patients covered while on the table and getting them off to bed as quickly as possible and surrounded with hot bottles are very important points.

Dr. W. B. Brinsmade said that he should like to ask Dr. Westbrook what virtue he finds in hot-water bottles placed around a patient who has been subjected to a severe operation. It has always seemed to him to do not a particle of good, and that much more good is accomplished with a covering of warm blankets and hot-water in the rectum. And it is utterly beyond his understanding how a hot water-bottle placed at the side of a patient can do any appreciable good.

DIRECTORY FOR NURSES.

The directory for nurses is at 102 Court street, Apollo Hall.

There was a delay of two weeks in effecting the change of telephone. The credit for the delay belongs to the telephone company. We are aware of the inconvenience it has caused the many patrons of the directory and trust that they will overlook it when they learn the reason.

399 Brooklyn will be the telephone number during the hours from 9 A.M., to 7 P.M.

2526 Brooklyn will be the telephone number from 7 P.M., to 9 A.M.

The introduction of the night telephone has been necessitated by Miss Provost's change of abode.

The Directory offers great advantages to nurses and patrons. The members of the Society should bear this in mind and make it known. It is deserving of their support because it does its work thoroughly and because it is supervised by the Society.

ASSOCIATED PHYSICIANS OF LONG ISLAND.

At a meeting of this Society, held at Patchogue on October 8th, it was decided to publish its proceedings in the BROOKLYN MEDICAL JOURNAL.

REPORT OF AN OBSTETRIC CASE—PENDULOUS ABDOMEN.

BY J. W. HYDE, M.D.,

Consulting Obstetrician, Long Island College Hospital; Obstetric Surgeon, St. Mary's Hospital, etc.

Read before the Brooklyn Gynecological Society.

The obstetric surgeon not infrequently observes cases of so-called pendulous abdomen, but the degree of deformity is generally so uniform that the just limit is supposed to have been attained, and little attention is given to such cases, especially as they usually regain a large degree of normality after parturition; however, I have recently seen a case which so far exceeds all others in my knowledge, in exaggeration of deformity, as to seem worthy of mention.

I was summoned in October to attend Mrs. R. in confinement. No previous opportunity had been afforded me to see and examine this patient. She was delicate, anemic, and wasted in appearance, with a history of long-continued prior disability, and with scarcely strength to move around her room. The same atony which characterized the abdominal muscles seemed to pervade the entire physical economy.

A more careful subsequent study of the history in this case demonstrates a perfectly healthy family history on both sides; but some time previous to her marriage the patient had a severe attack of inflammatory rheumatism, which involved the joints, especially the wrists and ankles, and which lasted about three months. Her recovery from this attack seemed complete. There are no indications of cardiac trouble resulting.

This was her third pregnancy, and as she had always felt badly the latter part of her periods of gestation, she ascribed her bad feelings to her condition and consulted no one.

The patient had been in labor two hours and a half when I arrived. An attempt to make an examination disclosed great abnormality of the abdomen, apparently its contents being precipitated forward into a long abdominal pouch and resting on the thighs, the most dependent portion being on a line with the junction of the middle and lower thirds; the umbilicus about on a

line with the middle of the thigh. (See Plate I.) The walls of this pouch were so attenuated as to permit as free an examination

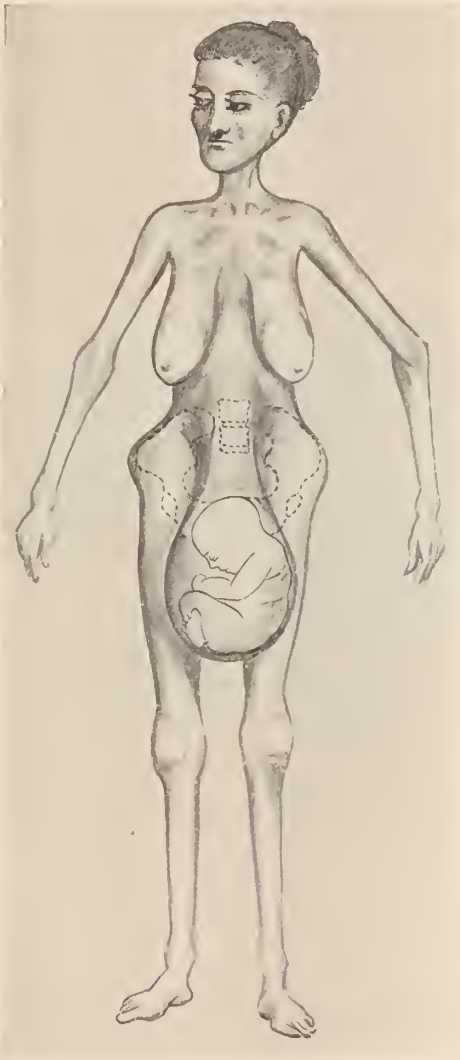

PLATE I.—Case of pendulous abdomen, showing portion of child in abdominal pouch outside of the pelvis; pelvis in dotted lines, indicating relative position of fetal head to superior strait.

of the child as though it were simply enveloped in a thick blanket, and a foot or hand could readily be detected and differentiated as

easily as the larger parts of the child's body. Indeed, it seemed impossible that any severe uterine contraction could take place without a rupture of the uterus.

Examination per vaginam showed a practically empty pelvis; —no cervix nor fetal parts within the usual field of touch; but reaching my fingers up over the symphysis pubis I came upon the occiput pressing well against a two-thirds dilated os—membranes unruptured, the whole being in *front* of the symphysis.

The method of procedure adopted was as follows: whiskey and a hypodermic injection of $\frac{1}{32}$-gr. strychnia were given. Chloroform was used to moderate narcosis. The whole pouch and

PLATE II.—Pouch turned back on abdomen—fetal head being guided into superior strait.

contents were then turned up backwards and laid in position on the abdomen where they were held; the child's head was then readily forced into the superior strait. (See Plate II.) The liquor amnii was discharged, forceps applied, and rapid extraction of the child accomplished.

So absolute was the relaxation of all the surrounding parts that a possible inversion of the uterus or a general prolapse was feared, but so unfortunate an occurrence was avoided. The uterus contracted well, and with careful abdominal bandaging and generous tonic treatment no untoward result followed. The abdominal walls have never regained their tonicity. The patient to this day bandages herself with great care, laying the thin ab-

dominal walls in large folds under the bandage as she recently demonstrated to me. There was no relaxation of the ligaments of the bony pelvis, although careful examination was made in this direction.

From the standpoint of the obstetrician this case is exceedingly interesting because of its great rarity. Without prompt assistance, death to both mother and child was certain. The uterus and entire contents being outside the pelvis, Nature could never have accomplished a delivery unaided. By lifting the pouch and inverting it upon the patient's abdomen the fetal head was readily guided into the L. O. A. position, indicating that this position had been primarily the one adopted by Nature in this case and most easy and safe for the mother. This is correctly indicated in Plate I.

The patient could not urinate in the recumbent posture as the bladder was drawn over the symphysis and obstructed by the superimposed uterus; however, this difficulty was obviated by the patient assuming the low sitting posture.

The astonishing relaxation or stretching of both uterine and vesical ligaments with subsequent recovery in the main of their tonicity indicates how much reliance can sometimes be placed in Nature as a restorer, and how often depressed physical conditions are responsible for conditions assumed to be curable only by grave surgical operations.

Five weeks subsequent to parturition an examination disclosed a not materially different condition of the pelvic viscera from that following any case of normal labor.

CONSUMPTION OF TOBACCO IN UNITED STATES.

The report of the Commissioner of Internal Revenue shows the following to have been the consumption of tobacco in the United States during 1896: Of tobacco, 248,269,638 pounds; of snuff, 10,831,474 pounds; cigars and cheroots, 4,163,972,440; of cigarettes, 3,328,477,780.

THE BROOKLYN MEDICAL JOURNAL.

Communications in reference to Advertisements or Subscriptions (Subscription Price $2.00 per annum) should be addressed: Business Manager, BROOKLYN MEDICAL JOURNAL, 260 Hancock Street, Brooklyn, N. Y.

Exchanges should be addressed: BROOKLYN MEDICAL JOURNAL, 102 Court Street, Brooklyn, N. Y.

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EDITORIAL.

ABUSE OF MEDICAL CHARITY.

This subject which has been so prominently before the medical profession and the lawmakers for the past few years is still receiving the attention of the one, and when the Legislature meets will doubtless engross considerable of the thought and time of the other. It is a subject upon which much light has been thrown by various committees that have been appointed to consider it, and it would seem that all its phases have been so discussed that an intelligent plan might be formed for the suppression of what is regarded by so many as a monstrous evil. Those desiring to refresh their memories prior to further discussions which are inevitable, will find ample material in the following pamphlets, all of which are on file in the Library of the Medical Society of the County of Kings: "Report to the Medical Society of the County of New York of Its Committee on the Abuses of Medical Charity," transmitted May 24, 1897; "Final Report of the Same Committee," December, 1897; "Abstracts of the Proceedings of the New York State Medical Association," of 1897; "The Attitude of the Medical Society of the State of New York toward the Dispensary and Other Medical Bills That Were before the Legislature of 1898," by Frank

Van Fleet, M.D., and a paper, entitled "The Abuse of Medical Charity," by F. H. Wiggin, M.D., of New York. In the latter Dr. Wiggin gives the following summary: (1) That medical charity, as at present administered, is an unqualified evil, and is seriously menacing our existing social conditions; (2) that the application for free treatment of those able to pay the physician a moderate fee for his services robs the poor; (3) that all medical charitable institutions should be under the direction and control of State and local boards of charities, who should have the power to enforce their rules; (4) that all applicants for charity should be investigated by local charity boards, and the unworthy excluded; (5) that no medical charitable institution should be allowed to charge nominal sums for medical or surgical service, nor should they be allowed to charge for medicines or appliances; (6) that *all physicians* connected with charitable institutions should be paid for the service which they render; (7) that it should be made a misdemeanor, punishable by fine, for any person to receive free medical treatment by reason of false representation as to financial condition; (8) that the financiering of many medical charitable institutions involves, as at present conducted, a breach of trust; (9) that no State or city aid should be granted to private medical charities.

Those who do not look upon the dispensaries as pauperizers of the community will find much encouragement from the paper of Dr. Van Fleet. He considers that the hard times of which physicians complain are not confined to the medical profession but are general, and that with others the physicians suffer. It is also his opinion that the statement commonly made that fifty per cent. of the people receive free treatment is absolutely false. He makes some interesting statements about legislators and legislatures, and directly charges that the State Board of Charities granted incorporation within twenty-four hours to a homeopathic dispensary, which it had refused for two years on the ground that any more dispensaries were unnecessary. He further charges that this was brought about through the influence of four members of the committee having the Dispensary bill in charge, two of whom were members of the County Association. On this point he says: "It was, however, a spectacle which might well cause one to stop and ponder. Here was a sub-committee, two members of which, at least, were members of the County Association, whose tenets have always been that a homeopathic practitioner was outside the pale of orthodoxy, obtaining a charter for a homeopathic dis-

pensary, which the homeopaths themselves had been vainly trying to obtain for nearly two years! We may say, too, that not only was this done by those who accuse others of disloyalty, but it was offered as a bribe to an individual in order to obtain his influence in securing the passage of a bill then before the Legislature; a transaction in which the State Board of Charities seems to have been an agent. Certainly here is a case for investigation.'

CEMETERIES AND THE PUBLIC HEALTH.

From time immemorial the proximity of cemeteries to thickly inhabited regions has been regarded as most prejudicial to public health. Until the discovery of pathogenic bacteria this was attributed to exhalations from the decomposing bodies of those interred, and to the pollution of the ground-water which subsequently found its way into wells from which it was drawn for potable purposes. Since the discovery and identification of disease-producing micro-organisms the tendency of sanitarians has been to regard these as the infecting element. While there have been numerous instances in which cemeteries have apparently been responsible for the spread of disease, still there have always been those who have claimed that the proof has been insufficient, and that other causes have been instrumental in producing the results attributed to the cemeteries.

The Imperial Board of Health of Germany has instituted an investigation into this important matter, the result of which is exceedingly reassuring to those who are compelled to live in the neighborhood of places of interment. In the experiments conducted under the board's direction dead hogs and dogs, in which had been placed tuberculous material, anthrax and typhoid germs, were buried in boxes in the ground and at various intervals of time thereafter both the ground-water and the soil were examined to determine the presence or absence of living germs. Ninety-six days was the longest time that the typhoid bacillus was found alive; while the cholera spirilum lived but 28 days; the tubercle bacillus less than 125 days, and the bacillus of tetanus less than 361 days. Anthrax was the most persistent, being found capable of communicating infection after one year. It must be borne in mind that these results were obtained by examination of the material inside the boxes or in immediate prox-

imity thereto. With the exception of the anthrax there were no germs found away from the places in which the bodies were buried.

H. P. DE FOREST, M.D., AND J. P. WARBASSE, M.D.

A brief but interesting letter has just been received by us from Dr. de Forest, dated "Camp Cuba Libre, Jacksonville, Fla., Third Division Hospital." Drs. de Forest and Warbasse have been in the service of the United States Government at this camp for two months assisting Dr. George R. Fowler, who is Brigade Surgeon. The hospital is in tents and in the short space of three weeks has increased from 200 to 550 patients. All, or practically all, have typhoid fever. Dr. de Forest has in his ward seventy-two cases, and at the time his letter was written there had been no deaths. Tuesdays and Fridays are operating days, and the three surgeons mentioned constitute the operating force.

The experience of these surgeons, together with that of other members of the County Society who have given their services to their country during the Hispano-American war, will be a most interesting contribution to medical literature.

PROGRESS IN MEDICINE.

GYNECOLOGY.

BY WALTER B. CHASE, M.D.

CONSERVATION OF THE OVARY.

Dunn, late assistant to Pozzi of Paris (*Transactions American Association of Gynecology and Obstetrics*, 1897) reports on one hundred cases observed by him in the St. Louis and Broca Hospitals in Paris, after complete oophorectomy, that in seventy-eight per cent. there was subsequent loss of memory, in sixty per cent. vertigo and heat flushes, and in fifty per cent. change of characacter. In seventy-five per cent. there was diminution of sexual desire, and varying percentages had other inconvenient symptoms after the operations. No one who has carefully observed will deny the fact that castration of the female was for a time, and is perhaps yet, carried to an unjustifiable extent. There is danger,

however, from the influence of just such papers that the pendulum will swing too far the other way. His paper is a masterly effort, and when taken as a whole is scientific and rational. It is not so radically conservative as some quotations from it would lead us to believe. There is another side to this question which is well presented in the discussion of Dr. Dunn's paper. To analyze the real conditions in the one hundred cases cited by him, we should have a careful statement of the conditions which led to the operation in each case and the probable results if they had not undergone an operation. The probabilities are that had operation been deferred until the time at which these observations were made, the conditions of the vast majority would have been much more pitiable than the doctor found them. We do not for a moment advocate indiscriminate castration on the appearance of disease of the ovary. We do claim, however, that of two evils we should choose the least, and that in actual disease of the ovaries the ultimate results, where the organ is allowed to remain, are, as a rule, much more grave, mentally, morally, and physically than they would have been had castration been resorted to.

MENSTRUAL SECRETION IN THE FALLOPIAN TUBES.

Bond (*Lancet*) says the presence of blood-stained, mucus-like menstrual fluid in the lower portions of the Fallopian tubes during uterine menstruation having been shown to occur in some cases, the question arises whether it originates in the tubes, or is due to backward regurgitation from the uterine cavity.

This latter is a conceivable explanation, especially as in some of the cases in which the tubes were removed mechanical conditions, such as retroversion, were present, which might possibly favor such a process. Against this explanation is the fact that:

1. The secretion appears so early in the tubes coinciding with or even preceding the appearance of the flow externally.

2. That definite changes are found in the Fallopian mucous membrane itself.

3. Examinations of the uterus in women dying during menstruation are not common. But in a case of a young girl with healthy uterus in which at the post-mortem examination made ten hours after death the uterus contained menstrual fluid, blood-stained mucus was also found in the Fallopian tubes.

4. In cases of imperforate hymen with uterine distension, backward regurgitation does not occur, as a rule, into the Fallopian tubes unless there be infection and the contents be purulent.

5. Experimental evidence derived from the study of the subject in animals shows that no backward regurgitation from uterus to Fallopian tubes occurs; this forms the subject of further research, and will be brought forward later.

Assuming, then, that the fluid originates in the Fallopian tubes as a true Fallopian menstruation, this at first sight seems at variance with the established fact that the fluid of a hydrosalpinx, or the accumulated secretion in a blocked and distended tube is a colorless watery fluid containing no blood. I have, however, ascertained that such fluid contains a very large percentage of chlorid of sodium in solution; this has a marked effect in breaking up red corpuscles and liberating hemoglobin, which may be thus absorbed. Possibly, also, a very slight increase of intratubular pressure, if constant, such as would arise early in a commencing hydrosalpinx, is sufficient to arrest the menstrual process in the very delicate tubal mucosa.

The occurrence of tubal menstruation, too, has an important bearing on certain cases of hematosalpinx, in which careful search fails to reveal the presence any tubal pregnancy.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

702d Regular Meeting, September 20, 1898.

The meeting opened with the President, Joseph H. Hunt in the Chair.

The minutes of the June meeting were read and approved.

The Council reported favorably upon:

Frederick W. Gilbart, Bellevue, N. Y., 1897.

Stephen L. Taylor, P. & S., N. Y., 1894.

Walter S. Wellington, L. I. C. H., 1896.

APPLICATIONS FOR MEMBERSHIP.

Thomas J. MacFarlane, 356 Greene avenue, P. & S., N. Y., 1886. Proposed by J. H. Hunt and D. Myerle.

L. A. Neiman, 73 Henry street, Balt. Med. Col., 1887. Proposed by Membership Committee.

Richard A. Henderson, 82 Morton street, L. I. C. H., 1897. Proposed by Membership Committee.

Edward Parrish, 134 Henry street, L. I. C. H., 1898. Proposed by Membership Committee.

Jacques Loewe, 45 McKibben street, L. I. C. H., 1897. Proposed by Membership Committee.

Luigi Galvano Doane, 757 Union street, Univ. Mich., 1871. Proposed by Membership Committee.

Joseph O. Kilgarriff, 199 Clinton street, Univ. of Dublin, 1889. Proposed by Membership Committee.

Rosalie Bell, 69 South Oxford street, Woman's Med. Coll., 1898. Proposed by Membership Committee.

Daniel Davidson, Bayonne, L. I. C. H., 1898. Proposed by Membership Committee.

John D. Doyle, 95 Second Place, Queen's Univ., Kingston, Canada, 1898. Proposed by Membership Committee.

Leslie Allen Turner, 256 Hancock street, P. & S., 1898. Proposed by Membership Committee.

J. H. Shaw, having removed to Cold Spring Harbor, made application to be transferred to the list of corresponding members.

The following having been regularly proposed and favorably acted upon by the Council, were declared by the President elected to membership:

Henry A. Santoire.

Patrick J. Mooney.

Arthur L. Reeve.

J. E. Midgley.

The minutes of a special meeting held August 6, 1898, for the purpose of disposing of the Bridge street property, and effecting a mortgage on the Bedford avenue property, were read and adopted.

The President thanked those of the members who came together to make a quorum for that meeting, stating that the Society was certainly under great obligations to them.

SCIENTIFIC BUSINESS.

"The Early Stages of Chronic Lead Poisoning and Their Treatment," by B. Onuff. Discussed by E. H. Bartley, Wm. Browning, W. H. Haynes, J. M. Van Cott, E. M. Childs, B. M. Briggs, and G. A. Evans.

"Diagnostic Methods in Diseases of the Stomach," by Lewis N. Foote. Discussed by G. A. Evans and E. M. Childs.

At the February meeting it was ordered that the Committee on Medical Abuses be continued in existence, and as last year the

matter was referred to the Committee on Public Health, the President referred it to them again.

The President announced that since the last meeting the following members had died:

Joseph Mott Turner on July 2d, was a member from 1859 to 1869.

Wm. Carter Otterson on August 17th, joined in 1866.

Wm. H. Bennett on September 1st, joined in 1876.

Also, Wm. Pepper, who was an honorary member of this Society.

The meeting then adjourned.

D. Myerle,
Secretary.

THE BROOKLYN PATHOLOGICAL SOCIETY.
THE 396TH REGULAR MEETING.

May 12, 1898.

The President Dr. James P. Warbasse, in the Chair.

The program of the evening was provided by Section III., Dr. Arthur R. Jarrett, Chairman, and Drs. French, Aldridge, Brewster, Butler, Duryea, Henry, Joerg, McClelland, Mead, Paine, Read, Shoop, Stratton, Torrey, and Moser.

There were fifteen members present.

PRESENTATION OF SPECIMENS.

PACHYMENINGITIS HEMORRHAGICA.—DR. W. W. LAING.

Mr. President, this specimen was taken from a patient who was operated upon by Dr. Fowler some five months ago. The diagnosis made at the time was tumor of the brain, but on trephining in the supposed location of the tumor without going through the dura, nothing was found. The patient was not further operated on and was discharged slightly improved in his symptoms. What the cause of these was we had no means of ascertaining at that time, and had no theory to advance except that of brain tumor of unknown location. On Saturday last the opportunity for autopsy presented itself, and Dr. Browning and I performed the autopsy. On opening the skull we found the dura mater all over the convexity of the brain was very greatly thickened, and on the right side a very large blood-cyst between the layers of the dura mater—a cyst large enough to contain my fist.

After presenting the specimen for your examination, I will give you the history of the case more in full. [Specimen presented]. The falx cerebri is found there in place. Here on the convexity is the very greatly thickened dura mater—Dr. Browning told me it was one of the thickest dura maters he had ever seen. Here on what would be the right side of the dura is the place where the blood was located between the two layers.

The clinical history of the case taken at time of operation is briefly as follows:

Man about 55 years old, married; cooper by trade; always been a hard-working man but a very heavy drinker; his favorite tipple was spirits, and some beer. Since January or February his hearing was very much impaired, and he had to be shouted at before he could be made to understand at all, but when people were talking around him he was aware of that fact but, not understanding what was said, always supposed they were talking about him, a fact which he very much resented. The hearing was very much more impaired in the left ear than it was in the right. The history is given on the authority of the son. The man himself at the time of the examination was in no condition at all to give any account of himself. In September last he went to a dispensary in New York City, and the card they gave him there would indicate that the deafness was supposed to be due to hardened wax in the ear; nevertheless, very little of it was taken out. At the time of the examination he was almost totally deaf at times but at other times heard pretty well. For a month now has been hearing church choirs singing and also church organ; these chiefly at night, but also sometimes in the daytime. For about three months or more has been suffering with left-sided headache; this is not located in one spot, but arises up near the ear and thence passes up the side of the head; was almost continuous but very much more severe at some times than at others. For a month, up to three or four weeks prior to operation was troubled with vomiting.

About a month ago he was in the Brooklyn Hospital and remained about two weeks in the medical service, and was discharged unimproved, without a diagnosis. Under specific treatment he improved for a few days, but immediately relapsed. At the time of examination is very weak and unable to rise or stand without support; all muscular effort is very greatly disturbed by trembling; has lost much weight; pulse about 66. For about two weeks voice only a whisper; chokes and gags when swallow-

ing anything and is no longer able to feed himself. Within two weeks has had three unconscious spells in which the breath stopped for a short time and apparently, from the account given by the family, was of the Cheyne-Stokes' type. Grip as indicated by the dynamometer, 6½ in the right and 11 in the left hand; knee-jerk very faint; wrist reflex also slight. Pupils clear and slightly dilated; do not respond to light. At times they would respond and at other times they would not, and they were sometimes unequal. Both optic disks were distinct though slightly blurred; vessels not dilated. The examination of the eyes was made by Dr. Browning.

He was sent into the Brooklyn Hospital with a diagnosis—from the location of the headache on the left side and the impairment of the hearing—of tumor of left temporal lobe near the posterior part. Trephining was done by Dr. Fowler and almost the entire temporal lobe was exposed, but the dura mater was not removed. Needles were thrust in and nothing was found, and it was decided to go no further. The patient remained for some time in the hospital and was decidedly improved by the operation. Immediately after it he was conscious of what he was about, knew where he was, and appeared to be quite himself, but was weak. While in the hospital he had two or three peculiar attacks of unconsciousness for which no cause could be ascertained—without rise of temperature—from which he could not be roused by any means adopted at the hospital. His temperature after the operation ran up and down irregularly, part of the time normal, partly subnormal, and partly very much elevated. The pulse had similar erratic rises and falls but without any relation to the temperature that could be discovered. He was discharged very much improved, and has been at home ever since—now about five months—and has been quite himself most of the time, although subject to slight attacks of delirium; headache, continuous and with severe paroxysms, and during which he was very much depressed and had suicidal tendencies. On Friday last during the continuance of one of these paroxysms, while the family were all out in the afternoon, he hung himself to the bedpost.

I find that authorities on pathology report that large hemorrhages into the layers of the dura mater is a very rare lesion. Small hemorrhages, not enough to cause very much, if any disturbance, are not uncommon.

There were a few adhesions between the dura mater and pia

of the brain on both hemispheres just at the summit—the fissure of Rolando—a space about as large as would be covered by a quarter of a dollar. There was an old scar in the scalp densely adherent to the pericranium and the skull, due to an injury the man had received years before, but there was nothing on the inside of the skull in that neighborhood to show that it had any relation to the conditions found at the autopsy. No examination of any other organs was made, because we could not get permission from the family.

CHRONIC NEPHRITIS.—DR. C. C. HENRY.

Mrs. B——, died 1891, æt. seventy-nine years; immediate cause pneumonia.

When about forty years of age she had an acute illness; whether due to pleuritis, nephritis or localized peritonitis, I was unable to learn; but her history shows that her after-life was attended with more or less pain in her right side.

She came under my observation about ten years prior to her death. During this period, she complained of pains in the right hypochondrium, her symptoms otherwise indicated gastric dilatation.

About two years previous to her death she had an acute inflammation in the right lumbar region, which terminated after a copious discharge of pus, by way of the bladder and urethra. This attack did not seem to leave any permanent lesion for she regained her former vitality; there was no diminution in the flow of urine, and her health was much the same as before; the gastric symptoms, however, continued, viz., some gastric pain, nausea, and vomiting after taking food; until pneumonia developed, which during the second stage caused her death.

Autopsy.—Heart, left lung, and liver in fair condition; lower part of left lung—second stage pneumonia; stomach—dilated; very much elongated, and shaped like a U, with the curve below the umbilicus, walls very thin; left kidney, enlarged, capsule adherent in places, cortex and pyramids fatty. Right pleura—old adhesions everywhere. Right kidney—so completely enveloped and bound down by old adhesions that it required very much patience and care to find and enucleate it; these adhesions involved the liver, duodenum, jejunum, ascending, and part of the transverse colon, mesentery, and omentum; the parenchyma is entirely destroyed, apparently by fatty degeneration; pelvis is enlarged.

The pyonephrosis I have mentioned was not sufficient to account for so great an amount of inflammatory product and so extensive lesions, therefore, I am of the opinion that that condition had existed before, and probably for forty years changes had been going on, and the function of that kidney was probably lost years ago, and the whole urinary function was carried on by the other kidney.

The kidney was so completely enveloped in fat that it was hardly possible to find the organ. The inflammatory attack lasted but a few days, and acted just as a pus-cavity would act under a high degree of inflammation, the pus found its way down through the ureter into the bladder. It was liberated and that ended that invasion.

The adhesions that were surrounding the kidney were localized there. The peritoneum was free elsewhere, and there were slight adhesions on the right side of the pleura which were unimportant, but the whole condition seemed to have been the result of very extensive inflammation at some time or other, localized in the vicinity of the kidney, and it is probably very difficult to know just where and how the inflammation began there. It did not impair the functions, however, of the liver and the other kidney; it probably did of the stomach; unquestionably the damming up of the duodenum had something to do with the dilatation of the stomach. The intestines, however, while their walls were thin, were not in any serious pathological state. The only history that gave any evidence of any inflammation of a severe character was an attack forty years before; there is a possibility that that condition of things had existed from that time.

CYSTIC CALCULUS.—DR. RAYMOND CLARK.

The specimen was removed by Dr. Pilcher at the Seney Hospital, and occurred in a woman twenty-three years of age, previous personal history negative, save for several attacks of acute articular rheumatism. Three years before she was admitted to the hospital she commenced to have pain in the lower portion of the abdomen, referred to the bladder from the very start. Before the operation she claimed that it dated from a fall she had had from a wagon; the symptoms continued to grow worse, she had more pain in the lower portion of the abdomen and complained of pain in the rectum, and some pain on defecation. The urination became more frequent, and just before the operation she was urinating about every hour, passed blood at times, and

complained of the stream at the time of urination stopping suddenly, followed by intense pain. Upon examination per vaginam a rubbing or grating sensation at the neck of the bladder could be felt on considerable pressure; the sound was introduced into the bladder and elicited the characteristic click. The incision was made through the vagina, the bladder was opened and a large calculus, about as large as a large English walnut, was removed with considerable difficulty. Embedded in the calculus was found a hairpin, and the deposit seemed to almost entirely surround it so it was only projecting somewhat, as you see, on one end. The specimen was broken or crushed in getting it out, because it would not come through the small opening made in the anterior vaginal wall. After the removal of the specimen the anterior wall of the bladder was closed and permanent drainage introduced through the urethra, and the wound healed per primum, and there was no leakage whatsoever. It is needless to say we did not present the specimen to the patient with the hairpin in the calculus, because she gave an entirely different history of the cause of her trouble.

DISCUSSION.

Dr. Warbasse (The President): This calculus was a very soft one and completely covered the hairpin, so that as the calculus lay in the bladder it obscured the hairpin entirely, but the calculus was broken in its removal.

Dr. Burge: There seems to have been a difference of opinion between the patient and the surgeon as to the cause of the calculus. No doubt the surgeon was right, but I suspect that the patient was honest, because the first symptom of stone in the bladder is frequently from a fall or a step from a height causing pain and trouble there, and very likely she attributed, very honestly, her condition to the fall which she had.

Dr. Harrigan: The case calls to mind a patient I had into whose bladder a hairpin was introduced, and when I first saw her she told me about it. My first impression was she was mistaken, and that she did not introduce a hairpin. The hairpin disappeared, and on examination it was found to be in the bladder. The patient was fortunate in having it removed on the following day. The presence of this calculus impressed me with how fortunate my patient was in having it removed. That occurred about a year ago. It was extracted through the urethra.

Dr. Warbasse: In a very interesting paper published some six or eight months ago by Dr. Hartley of New York, he reported a

series of cases based upon his experience concerning calculi in which the nucleus has been some foreign material. In three of his cases he reported the nucleus to be composed of chewing-gum which had been rolled up and introduced into the urethra, and the experience of finding hairpins as a nucleus in these calculi is quite a common thing. The most common nucleus, of foreign character, is the end of catheters which are frequently broken off.

ECTOPIC GESTATION.—DR. RAYMOND CLARK.

This specimen is from a case in Dr. Fowler's service at the Seney Hospital. Woman, thirty-three years of age, has had four children, the last one and a half years ago, and she did not menstruate until two and a half months ago. At that time she commenced to flow, and the flow continued up to the time of the operation. She complained of some pain across the lower portion of the abdomen, especially on the right side, and at times sharp, shooting pains. She had no fainting spell and no attack of profuse bleeding; it was just a continual oozing all the time. She was admitted to the hospital, and on examination a tumor was found in the right side. It was quite tender, and the patient was subjected to abdominal section for what was supposed to be a pyosalpinx on the right side. Upon opening the abdomen it was found to be a case of ectopic pregnancy, and the oozing had continued for such a long time that the patient was in a prostrated condition. Before she was admitted to the hospital she had been curetted five times. On removal of the right tube and ovary the rupture was found to have occurred to the right of the ovary, and the tumor dissected down between the two layers of the broad ligament.

KIDNEY FROM A CASE OF PUERPERAL SEPTICEMIA.—DR. RAYMOND CLARK.

This is a kidney which I removed to-day from a case of puerperal septicemia. Three days after giving birth to the child the patient complained of headaches and drowsiness, with very little pain in the abdomen. There were very few symptoms referable to the tubes or the uterus. The lochia at the time was not foul, but it was thought best to do a curettement, thinking that perhaps there were some retained secundines there. Curettage was done and nothing was removed, and the uterus for two weeks following was irrigated first with bichlorid solution, and then following that with Thiersch's solution, and the temperature continued to run rather high and gradually increased every afternoon until the day before she was operated on. The temperature was 105° F. in

the afternoon and pulse 130. At this time a tumor was plainly felt in the left iliac region, very distinguishable but not tender; the case was supposed to be either an abscess of the ovary or a pyosalpinx. Upon abdominal section it was found to be an abscess of the left ovary. The left ovary and tube were removed, and the temperature fell somewhat, and the pulse came down, but three days after that it began to go up again, and the uterus was washed out again without any effect upon the temperature or the pulse. A secondary operation was done and hysterectomy was performed, and permanent drainage was made through the vagina, and also through the abdominal wound—through-and-through irrigation from the abdominal wound over the wound of operation and running out through the vagina. The patient died two days after the last operation. At the autopsy it was found that the cul-de-sac was filled with pus, and the pus had dissected up behind the cecum, following the cecum and ascending colon as high as the liver, and there was a localized purulent peritonitis on the right side as high as the liver. She gave no abdominal symptoms; very slight distension, bowels moved regularly, and she had no symptoms of peritonitis, but she gave very marked symptoms of septicemia. Two days before she died blood, numerous casts, and some albumin were found in the urine; specific gravity 1028. The kidney showed very nicely indeed the enlargement—the large white kidney swollen, and the cortex swollen and pale—bloodless—and now and then little blood streaks down through showing where the blood had exuded into the tubules.

CONGENITAL CYSTIC KIDNEY.—DR. CHARLES H. GOODRICH.

This cystic kidney was removed at the Norwegian Hospital by Dr. Delatour some ten days ago, and is interesting from the fact that it is so large, and from the fact that at the operation the person was so slightly endowed with fat that the other kidney could be easily palpated and determined as being about normal in size; and the fact that the reaction from the operation was very satisfactory. However, as is occasionally the case, after two days the patient ceased to excrete urine in the necessary quantity, and gradually developed symptoms of uremia and died after four days. The size of the kidney and the fact that it had not given trouble until within a few months of the operation are interesting, and we have preserved the contour of the specimen for the pur-

pose of exhibiting its size. The cystic nature of the contents I think can be proven by palpating.

The fate of this woman reminded me of the only other case of congenital cystic kidney which it has been my fortune to observe, whose fate was quite similar, even after secreting as much as 24 ounces of urine in a day. The most this patient passed was 16 ounces. The patient whom I saw some three years ago passed 24 ounces of urine one day and 23 another, and still succumbed very quickly. The cause of her death could not be exactly determined, but probably was from an acute uremic attack. At that time some pains were taken to consult the literature concerning cystic kidney, and it is my impression that operations for the removal of congenital cystic kidneys are not, as a rule, successful. Why this should be is variously explained. In the first place, the other kidney is very often involved. The surgeon who removed this kidney is very certain that the other kidney was not enlarged; its surface was not irregular, and yet this woman as well succumbed. It seems as though the congenital weakness, and strain upon the system placed there because of the absence of so much renal tissue, predisposed to a bad result.

ADENOMA OF THE STOMACH.—DR. GOODRICH.

This tumor of the stomach was removed on the same day and by the same surgeon, Dr. Delatour. It occurred in a young women twenty-three years of age. The diagnosis of adenoma is made from the clinical history and the general appearance of the patient; first, because of her age, and second because her habits, as far as can be ascertained, have not been those of a person who would be liable to have chronic irritation of the gastric mucous membrane from the mode of eating and drinking, and because the time since the gastric symptoms first began has been so long—about three and a half years, and because emaciation has been very gradual, and apparently the direct result of the anorexia and vomiting. The appetite has been practically absent for many months, and the vomiting whenever she did take food has persisted for three or four months. She weighed 168 pounds about four years ago, and now weighs about 90 pounds. The diagnosis of carcinoma was made before the specimen was removed, but upon general discussion the diagnosis of adenoma has been made. It is not a hard tumor, and yet it undoubtedly has malignant features, and, therefore, until a microscopic examination can be made, we offer it as a malignant adenoma of the stomach. About

one-third of the stomach was removed. The patient did nicely, taking about an ounce of milk and an ounce of water every hour and is comfortable. The wound healed by primary intention. She ultimately made a good recovery.

DISCUSSION.

Dr. Warbasse: This is an extremely interesting specimen. Adenoma of the stomach we know is one of the rarest tumors which we encounter, and inasmuch as this particular specimen has not been subjected to microscopic examination I feel safe in expressing some doubt concerning the diagnosis. Indeed, upon section of this tumor we find a perfectly homogeneous cut surface with no evidences of regular epithelial deposits at all. A very noticeable and interesting thing about the specimen is the hypertrophy of the muscularis overlying the tumor. This might, on cut section, to the naked eye, easily be mistaken for part of the tumor itself, but the peculiar regular arrangement is a hypertrophy of the muscularis and has no connection with the tumor at all. The cut surface of the tumor is perfectly regular and homogeneous, and it presents much more the appearance of some other regular cellular deposit, such as fibrosarcomatous deposit, rather than a deposit of an epithelial character.

Dr. Goodrich: I do not feel at all sure that the diagnosis of carcinoma is any more probable than that of adenoma. The occurence of fibrosarcoma in the stomach is as unknown to me practically as that of adenoma, and I feel unable and unfit to advance any opinion that is contrary to that of the President regarding that.

VILLOUS PERICARDITIS.—DR. CHARLES H. GOODRICH.

This heart I removed at an autopsy about three weeks ago.

The man had been suffering from a chronic interstitial nephritis for some months. He had had rapid heart action but had not given any signs of heart disease. A number of men whose diagnostic acumen is known to you all, saw the case and no heart lesion was diagnosed, and yet at the autopsy a condition which I never have witnessed before was found—a condition which is not seen to the best advantage now, for then the visceral pericardium was everywhere adherent to the parietal pericardium so that some violence had to be used to separate the two layers. The villi were of a brilliant red color, and in the interstices, so-called, were a number of collections of bloody serum. This man, as I say, had never given any sign of heart disease, and that

these cases are not unusual, I find in the literature. A number of cases have been reported—how many I cannot say—but a number of cases where this condition has been found at the autopsy when no cardiac condition or pericardial lesion had been suspected in the least. The lesion was apparently comparatively recent, not over two or three-months' duration I should have said, and a pretty demonstration of the spot where the heart rubs against the anterior chest wall is shown at the autopsy by a perfectly smooth, glistening area of a pale pink color. On the posterior surface, likewise, there was a smaller area which was of the same color, and as I replaced the heart I found that was the spot where the heart rested upon the anterolateral surface of the vertebral column. It is a specimen of what some authorities call cor villosum or shaggy heart, and as the contracted kidneys accompanied it it is not difficult to understand how this patient came to his death.

DISCUSSION.

Dr. Warbasse: I am sure that Dr. Murray has encountered examples of this extremely interesting condition.

Dr. Archibald Murray: I have had two cases of it in autopsies at various times, and have taken the specimens down and shown them to the students at the Long Island College Hospital, but they differed in no way from this except there was not quite so much deposit on the heart.

Paper: "Malignant Neoplasms of the Nose, illustrated by a specimen of Cylindroma," by Dr. Willard G. Reynolds. [Paper read.]

DISCUSSION.

Dr. Charles H. Goodrich: I had the honor of assisting Dr. Sturgis some months ago in the removal of a tumor of the nose which was not pedunculated, nor was it localized, for it extended into the antrum and completely occluded all portions of the nasal cavities. On that tumor the pathologist's report was that of sarcoma, the small round-cell sarcoma; and that such tumors in their removal give the most furious kind of hemorrhage I can bear witness, for never have I seen a more startling hemorrhage than occurred in that case, or one more difficult to control even with strong efforts at close packing. The patient was a young woman 23 or 24, and the trouble in the nose had existed for about two years.

HISTORICAL DEPARTMENT.

BROOKLYN PATHOLOGICAL SOCIETY.

The history of any organization is simply the history of those who were active in its work.

The success of any society depends upon the earnest work of a few of its members, aided by the general and hearty support of all connected with the organization. It is, therefore, to be expected that in outlining the history of any society certain of its members will be mentioned by name, while others who may have been faithful and earnest in their efforts to promote the best interests of the society are not named, for the reason that their work was along lines carrying with it little or no prominence.

Previous to the formation of the Homeopathic Medical Society, County of Kings, November 12, 1857, a State law required that all physicians who desired to practise medicine in Kings County should become members of the County Medical Society.

This necessity required homeopathic physicians to present their names for membership in the County Medical Society.

As a natural result the admission of homeopathic physicians met with much opposition and caused a lack of interest in the attendance at the metings of the Society, the outcome of this indifference to the County Medical Society being that the Brooklyn Medico-Chirurgical Society came into existence.

This Society was organized November 10, 1856. The following well known physicians held the office of President during its existence :

Andrew Otterson, M.D., President, 1856–59.

Joseph B. Jones, M.D., President, 1860.

Daniel Ayres, M.D., President, 1861–63.

John Henry Hobart Burge, M.D., President, 1864–65.

Henry J. Cullen, M.D., President, 1866.

This Society marked the beginning of the study of Pathology on Long Island; for at its meetings were presented for discussion pathological specimens, the first time any thing of this character was ever attempted in the City of Brooklyn.

The laws of the State having been amended so as to permit the organization of more than one County Medical Society,

JONATHAN SALTER PROUT, M.D.
RICHARD MORRIS WYCHOFF, M.D.
FREDERICK W. WUNDERLICH, M.D.

CHAS. H. GIBERSON, M.D.
J. H. HOBART BURGE, M.D.
RICHARD C. STILES, M.D.
WM. H. THAYER, M.D.
CHARLES COREY, M.D.

ARTHUR MATHEWSON, M.D.
BENJ. AVERY SEGUR, M.D.
JOHN BYRNE, M.D.

ORGANIZERS OF THE BROOKLYN PATHOLOGICAL SOCIETY.

ARTHUR MATHEWSON, M.D., 1880.

FRANK WARREN ROCKWELL, 1877-78-79.

BENJ. WESTBROOK, M.D., 1884-85-86.

JOHN N. FREEMAN, M.D., 1883.

CHAS. HENRY GIBERSON, M.D., 1876.

WILLIAM WALLACE, M.D., 1881-82.

JOSEPH HILL HUNT, M.D., 1887-88.

thereby removing the feeling of opposition to the existing Society, peace and harmony were restored.

In a few years the Medico-Chirurgical Society found that its usefulness as a Society had practically come to an end, and the Society was discontinued in 1866.

For a few years nothing of importance developed until the formation of the Brooklyn Pathological Section, in connection with the Medical Society, County of Kings. The preliminary meeting was held at the office of Charles H. Giberson, M.D., 188 Remsen street, on the evening of March 3, 1870, at which time it was agreed to issue a call through the Medical Society, County of Kings, for a meeting to be held at the rooms of the Board of Health, on the evening of March 22, 1870. The Assistant Superintendent was Dr. R. C. Stiles, who had kindly offered the use of the rooms for the meeting.

Eleven physicians responded to the call as follows:

Charles Henry Giberson, M.D., Obit. April 14, 1879.
Richard Cresson Stiles, A.B., M.D., Obit. April 17, 1873.
Charles Corey, M.D., Obit. April 4, 1894.
John Henry Hobart Burge, M.D.
John Byrne, M.D., LL.D.
Arthur Mathewson, A.M., M.D.
Jonathan Slater Prout, M.D.
Benjamin Avery Segur, B.S., M.D.
William Henry Thayer, A.B., M.D., Obit. Dec. 22, 1897.
Richard Morris Wyckoff, A.B., M.D.
Frederick William Wunderlich, M.D.

At this meeting the Brooklyn Pathological Section was organized, By-Laws were adopted, and Charles H. Giberson elected to the office of Secretary and Treasurer, a Chairman being elected at each meeting of the Section.

In 1876 the By-Laws were modified so as to provide for the election of a President and Vice-President, but it was not until 1884 that the Pathological Section became a distinct organization, as in this year the By-Laws were so changed as to admit to membership all physicians in regular standing, irrespective of their membership in the Medical Society, County of Kings.

The Presidents of the Brooklyn Pathological Society from its organization to the present time have been as follows:

Charles Henry Giberson, M.D., first President of the Society, was born in the Parish of Kent, Bath, Carleton County, New Brunswick, on September 5, 1838, and died in Brooklyn, N. Y.,

April 14, 1879. He was a graduate of the University of Vermont, Medical Department, in 1861, and was Assistant Surgeon in the U. S. Navy from 1861–65. During the year 1865 he attended the Post-Graduate course at the Long Island College Hospital. He practised medicine in Brooklyn from 1868 to 1879, and occupied the position of President of the Pathological Society in 1876; in 1872 he delivered the Semi-Centennial address before the Medical Society, County of Kings.

Frank Warren Rockwell, M.A., M.D., was born in Valatie, near Albany, December 22, 1843. Died in Brooklyn, N. Y., April 30, 1889, receiving the degree of A.B., 1865, and A.M. in 1868 from Amherst, and graduated M.D. from the College of Physicians and Surgeons, N. Y., 1868. Lecturer on Materia Medica, "Reading Term," L. I. C. H., 1874. President of the Brooklyn Surgical Society, 1887–88. President Brooklyn Pathological Society during the years 1877–78 and 79. He practised medicine in Brooklyn, N. Y., from 1868–89.

Arthur Mathewson, M.A., M.D., was born in Brooklyn, Connecticut, September 11, 1837, received the degree of A.B., 1858, A.M., 1865, Yale University, graduated M.D., University City of New York in 1861. Assistant Surgeon, U. S. Navy from 1861–64. Surgeon, 1865. Surgeon U. S. Naval Hospital, Brooklyn, N. Y., '66. Lecturer, Diseases of the Eye and Ear, Yale University Medical Department. Clinical Professor Diseases of the Ear, L. I. C. H., 1872–95. President Brooklyn Pathological Society, 1880. Has practised in Brooklyn since 1867.

William Wallace, M.D., born in Cork, Ireland, May 14, 1835. Died in Brooklyn, N. Y., December 22, 1896. Graduated at the Royal College of Physicians, Edinburgh, in 1856. Royal College of Surgeons in 1860. Was Assistant Surgeon in the Royal Navy in 1855. President of the Medical Society, County of Kings, 1887–88. President of the Brooklyn Pathological Society in 1881 and 82. He practised in Brooklyn from 1864–94.

John N. Freeman, M.D , born in La Grange, Ohio, August 4, 1831. Died in Omaha, Nebraska, August 18, 1888. Graduated M.D. from the University, City of New York, 1862. Assistant Surgeon Duryea's Zouaves, 1862–63. Surgeon 106th New York Volunteers, 1863–65. President of the Brooklyn Pathological Society in 1883. Practised medicine in Brooklyn, N. Y., from 1869–88.

Benjamin Frank Westbrook, M.D., was born in St. Louis, Mo., February 4, 1851. Died in Brooklyn, N. Y., April 12, 1895.

Graduated M.D. from the Long Island College Hospital in 1874. Lecturer on Anatomy, L. I. C. H., 1879–80. Lecturer on Anatomy and Pathological Anatomy, 1880–82. President L. I. C. H. Alumni Association, 1886. President Brooklyn Pathological Society, 1884–85–86. He practised medicine in Brooklyn, N. Y., 1875–95.

Joseph Hill Hunt, B.S., M.D., was born in Huntsburg, Sussex County, N. J., April 12, 1848, receiving the degree of B.S. from Washington and Lee University in 1869. Graduated M.D. from the College of Physicians and Surgeons, N. Y., 1873. Demonstrator and Instructor of Histology and Pathology, L. I. C. H. Demonstrator of Histology, Brooklyn Anatomical and Surgical Society; Member of the Kings County Board of Pharmacy; Professor of Botany, Materia Medica and Pharmacognosy, Brooklyn College of Pharmacy, 1893–95. President Brooklyn Pathological Society, 1887–88. President Medical Society County of Kings, 1898. Practised medicine in Brooklyn, N. Y., since 1874.

John Cargill Shaw, M.D., born in Jamaica, West Indies, September 25, 1845. Graduated M.D., College of Physicians and Surgeons, N. Y., 1874. Medical Superintendent of the Kings County Insane Asylum from 1874 to 1883. Clinical Professor Diseases of the Mind and Nervous System, L. I. C. H. since 1883.

President New York Neurological Society, 1872 and '76.

President Medical Society, County of Kings, 1893.

President Brooklyn Pathological Society, 1889–90. Practised medicine in Brooklyn, N. Y., since 1883.

Ezra Herbert Wilson, M.D., born in Port Jefferson, L. I., November 24, 1859, graduated M.D., College Physicians and Surgeons, N. Y., 1882. Director Department of Bacteriology, Hoagland Laboratory, Chief of the Bureau of Bacteriology, Health Department. President Brooklyn Pathological Society, 1891.

Joshua Marsden Van Cott, Jr., M.D., born in New York City, 1861. Graduated M.D. Long Island College Hospital, 1885. Director Department of Pathology, Hoagland Laboratory, Professor Histology and Pathological Anatomy, L. I. C. H. since 1891. President of the Brooklyn Pathological Society, 1892–93. In practise since 1887.

William Nathan Belcher, M.D., born in Brooklyn, N. Y., December 29, 1862, graduated M.D., Long Island College Hospital, 1884. Instructor in Histology and Pathological Anatomy, L. I. C. H., 1890. Lecturer on Physiology, "Reading

Term," L. I. C. H. President Brooklyn Pathological Society, 1894. Practised medicine in Brooklyn, N. Y., since 1885.

Francis H. Stuart, M.A., M.D., born in Logansport, Ind., July 29, 1846, received the degree of A.M. from Hamilton College, graduating M.D. from the Long Island College Hospital in 1873. Registrar of Vital Statistics, Department of Health, Brooklyn, N. Y., 1875–78. Lecturer on Obstetrics, "Reading Term," L. I. C. H., 1880–86. Acting Professor of Surgery, L. I. C. H., 1895–96. President Brooklyn Anatomical and Surgical Society, 1884. President Brooklyn Pathological Society, 1895. In private practice in Brooklyn, N. Y., since 1874.

Frederic Joseph Shoop, M.D., born in Braceville, Ill., February 8, 1862. Graduated M.D., College Physicians and Surgeons, N. Y., 1883. President Brooklyn Pathological Society 1896. Practised medicine in Brooklyn, N. Y., since 1886.

James Peter Warbasse, M.D., born in Newton, N. J., November 22, 1866, graduated M.D., College Physicians and Surgeons, N. Y., 1889. President of the Brooklyn Pathological Society, 1897. In practice in Brooklyn, N. Y., since 1892.

Literally speaking, the Pathological Society has not been very active; true many of its members, particularly those who have held the office of President have enriched our medical literature by presenting papers at the meetings, also at the meetings of other Medical Societies, numbering about 108. Independent of books and contributions to bound volumes this figure would be double or more, when we consider the contributions made by individual members.

The proceedings of the Society were published, together with those of the Medical Society, County of Kings, in their Journal from 1876 to 1883. The transactions of the Pathological Society for the years 1885 and 1886 were published in an 8vo volume of 233 pages.

The first number of a magazine, under the name of *The Pathologist* was issued in January, 1881. This magazine continued to be published until 1883, its editor being the late Edward Seaman Bunker, M.D. The Chair of Histology and General Pathology was founded by Dr. Bunker at the Long Island College Hospital in 1879. He was a member of this Society from 1873 to the time of his death.

In 1894, William N. Belcher, M.D., who was then President, delivered an address before this Society, which was afterward published, being so far as known to the writer, the only address

JOSHUA M. VAN COTT, M.D., 1892–93.

FRANCIS STUART, M.D., 1895.

EZRA H. WILSON, M.D., 1891.

FRED. J. SHARP, M.D., 1896.

JOHN C. SHAW, M.D., 1889–90.

WILLIAM N. BELCHER, M.D., 1894.

JAMES P. WARBASSE, M.D., 1897–98.

PRESIDENTS OF THE BROOKLYN PATHOLOGICAL SOCIETY, 1876—1898.

ever published relating directly to the Pathological Society of Brooklyn. A report of the proceedings of the Twenty-fifth Anniversary of this Society, together with the address of Joseph H. Hunt, M.D., and other addresses were published in the *Brooklyn Medical Journal* in 1896.

Previous to 1856 the study of pathology on Long Island was practically unknown, and even to-day, I believe we are the only Society that has been devoted to the study of pathology on the Island, with the exception that during the years 1874 and 1875 there existed a Pathological Society in South Brooklyn, with Joseph E. Clark, M.D., as President.

An approximate estimate of the membership of this Society during the twenty-seven years of its existence is as follows:

Died in active membership . . .	30
Removed	70
Present number of members . . .	150
Total	250

In conclusion may I express the hope that the Pathological Society of Brooklyn, as this city merges into the greater city, may increase in membership and in usefulness, and that the interest manifested in its proceedings during the last few years may be an incentive to greater work in the future.

Considering that the study of Histology and Pathology, as we now understand it, is the product of but recent years, the advances made in this study by members of this Society are truly commendable. I well remember, in my student days at the Long Island College Hospital, the look of surprise that passed over the faces of the members of our class when the announcement was made that a Chair of Histology and Pathology had been established, a look which plainly said, "What is it?"

The Brooklyn Pathological Society has just cause to be proud of its record in the past, for if any one body of medical men more than any other have been instrumental in presenting the necessity of education in the science of pathology, and in giving an opportunity to the profession of this city to study pathology in its scientific and practical bearing, it has been those who have cherished, and worked for its aims and its interests in the past, and now look forward to a broader and a grander field for labor and for achievements in the years to come in the history of the Brooklyn Pathological Society.

William Schroeder, M.D.

MISCELLANEOUS.

THE CARE OF THE WOUNDED AT SANTIAGO.

BY VICTOR C. VAUGHAN, M.D.

Returning from Cuba a few days ago on board the "Segurança" in charge of sick soldiers, one of the first things to meet my eyes was a reproduction in the daily papers of an editorial from your columns attacking the Medical Department of the army. On this point I wish to say only a few words at present, and I hope to give more in detail later. I was at Siboney from the 27th of June until the 25th of July, and I think myself quite competent to speak concerning the treatment of the sick and wounded at that place, where the general hospital was located. Concerning the surgical skill of the operators at Siboney there can be no question. In the hands of such men as Le Garde, Nancrede, Parker, Fauntleroy, Ireland, and medical officers from our fleet, the wounded soldier had the best scientific treatment. As to the general care of the wounded, I may say that, while this is my first experience in taking care of those wounded in battle, I do not believe that there ever was before an engagement as bloody and as prolonged as that of Santiago in which the wounded were so well cared for. Every soldier carried in his knapsack a first-aid package, and all had been trained more or less thoroughly in their application. Personally I distributed about twelve hundred of these, and quite a number of these same bandages came back to me on wounded soldiers. I can from personal knowledge testify to the fact that many lives were saved by their use. So far as I know, this first-aid package has not been so extensively used in any other war. For many wounds these dressings, applied by comrades on the fighting-line, were all that was needed until the injured man reached the hospital.

The transportation from the front to the hospital at Siboney was not what we wished. There were only a few ambulances, and most of the wounded were brought to the hospital in army wagons. Many men suffered severely during this ride. The intense heat, the cramped position of many in the crowded wagon, and the jolting of the heavy vehicle over the rough road, all combined to give discomfort. Why were there not more ambulances? They were left at Tampa or were not unloaded on the Cuban

coast. The Medical Department was not, however, responsible for this. To provide transportation is the duty of the Quartermaster's Department, but I do not know that any one can be censured very greatly for the failure to provide a sufficient number of ambulances. It is well known that the transports were crowded, and the landing of animals and vehicles both at Baiquiri and at Siboney was a dangerous and difficult task. I was on a transport which approached the coast as nearly as the captain dared. When the anchor was dropped from the prow, the line went down forty fathoms, while the depth at the stern was only seven fathoms, and not fifty yards away were the sharp rocks of a precipitous coast. It can be readily imagined that with high waves dashing against the ship such a position might quickly become perilous. Horses and mules had to be pushed into the water, and, while most of them swam ashore, some were drowned. Even the landing of men was not easy. We had to drop as best we could into rowboats, which at the time were being tossed up and down by the waves, and when the boats neared the shore they often became unmanageable and were filled with water. Like many others, I waded ashore. There are many, especially among those who stayed at home, who are ready to tell us of the great mistakes made in this campaign. They say that Shafter should have taken more time. He should have encamped on the shore and built good docks, so that everything on board the transports could have been landed. He should have built good roads all the way from the landing-place to Santiago. He should have brought up heavy artillery. Soldiers should not have been allowed to charge fortifications and batteries without artillery support. These are some of the many things that we are told should have been done. I have no claim to military knowledge, and General Shafter did not consult me; but as a medical man I wish to say that in my opinion had half these things been attempted the Spanish flag would be to-day floating over Santiago and the American army would have been fortunate had one-half of it escaped both sickness and Spanish bullets. Enervated by heat and disease, the army could not have made two weeks later the glorious charge it did make on San Juan. Dock-building on Cuba's coast and road-making in its mountain passes at this time of year would, in my opinion, have caused more deaths than were due to the great fight at El Caney. This is not altogether a matter of medical opinion. It is a fact that the regiment left at Siboney and between that place

and Aguadores furnished the first case of yellow fever and suffered most severely from that disease. It is well-known to students of epidemiology that yellow fever is most frequent and most virulent immediately along the shore. The fighting was practically over by the evening of July 3d. On the 5th I saw the first case of yellow fever. Before that day had passed we had three or four more cases, the next day about thirty, and the next more than fifty; and all of these were among those working on the coast.

On the arrival of the wagons loaded with the wounded at the hospital at Siboney the men were placed as best we could. At the request of Dr. Le Garde, I superintended the placing of several trains of the wounded. It is true that there was not always a cot ready for the reception of each man, and those least seriously wounded had to lie on the ground for some hours; but we had blankets and made them as comfortable as possible. No one was neglected. Every one who could do so lent a helping hand. At least one newspaper reporter gave his time for days to feeding these men. I think that he furnished the food from his stores and prepared it himself. That it was good I can testify, because he brought me a cup of his broth late at night on more than one occasion. That no one was neglected I know, because on Dr. Le Garde's order I went with an orderly carrying a hypodermic syringe and tablets of morphin and strychnin late every night through all the tents, and ordered special attendants for those in need. Drs. Fauntleroy, Ireland, and others went through the tents more frequently and were untiring in their labors.

As to the lack of dressings and other supplies, I wish to say that, so far as I know, the charge on this score is as unfounded as is the general statement that the wounded were neglected. I never failed to find suitable and sufficient material for dressing wounds. We exhausted certain things. We ran out of iodoform gauze, but there was plenty of bichlorid gauze. The Red Cross sent up a big box of dressing, for which Dr. Le Garde gave thanks in his big-hearted way so warmly that one of the officers of this society now tries to make it appear that without this aid the wounded soldier at Siboney could not have had his broken limb bound up. The absurdity of this is evident from the fact that medical officers from the "New York," "Iowa," and other ships of our fleet came over daily and worked at the operating-tables. Will any one claim that there were no surgical dressings on these ships?—From the *New York Medical Record.*

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

ENTERED AT BROOKLYN, N. Y. POST OFFICE AS SECOND CLASS MATTER.

EDITOR IN CHIEF:
JOS. H. RAYMOND, M.D.

BUSINESS MANAGER:
F. D. BAILEY, M.D.

ASSOCIATE EDITORS:
H. L. BARTLETT, M.D., DAVID MYERLE, M.D.,
WM. BROWNING, M.D.

VOL. XII. No. 12. WHOLE No. 132. } BROOKLYN, N. Y., DECEMBER, 1898. { Single copies 25 cents. $2 a year, in advance.

ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

MERCURIAL NEUROSIS RESULTING FROM AMALGAM FILLINGS.

BY J. Y. TUTHILL, M.D.,
Brooklyn, N. Y.

Read before the Medical Society of the County of Kings.

Mercurial neurosis is a field of pathology which has not received the investigation it deserves by the medical profession. While the poisonous effects of mercury have so long been recognized that I need take no time in rehearsing them, yet there are certain causes affecting the nerve-centers which demand more thorough investigation than has yet been given.

In presenting this subject to the Society for consideration I want to show that by the use of amalgam in filling teeth there is a possibility of mercurial poisoning, which seriously affects the nerve-centers, impairs locomotion by heaviness of limb and stiffness of joint, gives rise to obstinate diseases of the skin, and makes a mental wreck of its victim, whose imaginations and hallucinations are more than my pen can describe.

Physical examination reveals nothing to assist the physician in making a diagnosis of his case, as all the functions are usually well performed. There is, however, nervous depression, irritability, unreasonableness, an inability to overcome and throw off feelings of oppression which settle upon the patient and hold him as in the clutches of despair until his ambition is broken, his energy is gone, his purpose is lost, and he drifts for lack of power to concentrate his actions and assert himself as a force in the world. There are shifting, shooting pains here and there from head to foot, affecting sometimes one part and then another; numbness of hand, foot, or jaw, heaviness of leg, arm, or head, with an almost inability to move them, and a feeling as though one would fall or lose consciousness. Again there is a light, floating sensation as though moving in air. There is mental excitability as well as mental depression; perplexing events cause the highest degree of excitement, ordinary conversation sometimes causes complete confusion, headache, palpitation, intense solicitude, and anxiety, without reason for it. Such are some of the symptoms attending these cases.

To bring this pathological condition more clearly to your thought, allow me to cite a few cases which have come under my observation during the past few years, and you will pardon me for alluding to my own individual case which first opened my eyes to this subject.

During the winter of 1884 and 1885, when working far beyond the limits of good judgment, and averaging from October 15th to April 27th, not more than from 4 to 4½-hours' sleep per night, I was attacked February 1st with neuralgic and rheumatic pains, usually short in duration, lasting from 10 to 15 minutes to 3 or 4 hours, affecting chest, back, arms, and legs. My work was arduous, and the professional demands upon my time and strength prevented my getting adequate rest. With failing strength and energy, I continued my daily routine of work until April 27th, when I was in a state of physical and mental collapse. I sought a quiet place for rest, and April 28th went to Saratoga Springs. Arrived there at 3 P.M., and in half an hour was in bed. I had a good night's rest, and after breakfast the following morning took a stroll through the village, which at this season of the year is the sleepiest place of its size that I know of. Then, thought I would write home news of my safe arrival and a good night's rest. But never was I more surprised than to find that I could not write more than two or three words when my hand

would be so numb that I could not hold the pen, until I had rubbed it for some minutes. The same processes were repeated over and over again until I succeeded in writing a short letter. This condition continued, with some abatement, for many weeks and, in much less degree, for years following. I remained in Saratoga for 10 days, sleeping 13 and 14 hours in every 24, then returned home and resumed practice feeling much improved.

An eruption which appeared like psoriasis, and had troubled me for several years, became more troublesome and refused to heal, much to my annoyance and chagrin. All the foregoing conditions continued up to the spring of 1889, when a persistent headache, often of neuralgic character, continued for 2 or 3 months, which was relieved by taking a 4-months' trip abroad.

Since that time I have had average health, with occasional numbness of hands. The handling of steel would almost paralyze my hands for some minutes to come. The eruption continued the same, resisting all treatment that my own ingenuity could devise or that my professional brethern, who took a kindly interest in my case, suggested.

The numbness attended with pain in the fingers, was thought to be a form of gouty neuritis. Following their advice, I took such remedies as they prescribed, sometimes it seemed for the better, but with no permanent improvement.

In the summer of 1895, spending the month of August on the Shawangunk Mountains, I was applying to the eruption several times a day, a lotion of bichlorid of mercury, which accomplished more for healing than anything I had ever used; but while the eruption was fast getting better, my hands were rapidly losing their power and I could not rely on holding anything, nor could I pick up small things like pins, needles, or twine, because of the numbness. At this juncture, it occurred to me that I was absorbing mercury, and that mine was a case of mercurial neuritis or paralysis, the result of this absorption, and that the eruption was a mercurial psoriasis. Returning to the city I laid the matter before several physicians, who thought I was mistaken as my gums showed no evidence of mercurial poisoning, and on their advice resumed the use of the bichlorid lotion, but was compelled to abandon it in a few days because of the numbness which followed. I reported my condition. They then agreed with me that the mercury affected my system in an unusual manner, but thought that I had an idiosyncrasy, and that it would probably

not affect more than one in a thousand under the same circumstances.

Being thoroughly aroused as to my state, and having several amalgam fillings in my teeth, I soon came to believe that my entire condition, the numbness, the rheumatic pains, and the eruptions were all due to the action of mercury absorbed from those fillings. So I decided to have them removed, and the work was done in May, 1896. In two weeks I felt like another man; it seemed as though a great weight had been lifted, and I was once more free from an oppression which had hung over me like one long nightmare for years, handicapping, restricting, and restraining me on every hand.

My improvement has continued from that time to the present, the numbness growing less and less, the eruption disappearing until there is less of it than at any time in 15 years.

I do not imagine that all the mercury that I absorbed from those fillings which I carried for thirty-eight years, is out of my system, but from my general improvement, believe it is growing less all the time, and I am feeling better than at any time since the spring of 1885. Having lived for eleven years on the ragged edge of hope and dispair, and thus secured my freedom from a bondage worse than human slavery, I could appreciate the sufferings of others when they rehearsed experiences which I had realized. As a natural consequence, I readily recognized the same enemy to their peace and happiness which had shattered my own.

In December, 1896, I was called to see Miss F., aged thirty-three years, who had been in excellent health previous to an attack of la grippe in December, 1892. Since then her nervous system had been much disturbed, and she had come to be melancholic and to withdraw herself from her family and friends, seeking the seclusion of her room—refusing to go out or to associate with others, or even with the members of her own household. When I was called, she had been treated by five different physicians with no improvement. I treated her for indigestion, torpid liver, constipation, etc., for ten weeks, with no improvement in her mental condition. Then numbness of hands and stiffness of jaws led me to examine her teeth, when I found five amalgam fillings which I believed had produced a mercurial neurosis. I gave it as my opinion that her condition was due to the effect of mercury upon her nervous system absorbed from those fillings and advised their removal. She was stubborn

and for some time refused, but yielded in May, 1897, and had the work done. She has steadily improved since that time, and her family say that she has not been so well in five years as now.

In the early part of last September, Miss E., aged eighteen, was brought home from a three-months' sojourn in the country, with all the indications of typhoid fever. Intestinal antiseptics, tonics, etc., arrested the progress of the case, but an unaccountable languor, debility, loss and flabbiness of flesh with drowsiness, continued for several weeks, she sleeping 18 and 20 hours out of 24. My case otherwise appearing well, her sluggish gait, heaviness of limbs, and stiffness of jaws, led me to examine her teeth, in which I found 9 amalgam fillings. Being convinced that these were retarding her recovery, I advised their removal and the substitution of gold. When the filling were taken out she became more wakeful and animated, and has continued to improve although still suffering from the effects of the absorbed mercury.

Miss K., a young lady of culture and refinement, was brought to my office December 1, 1887, suffering from extreme nervousness, which had continued for 3 years. She was restless and could not apply herself for any length of time to any one thing, sleepless, irritable, hysterical, etc. Having made a thorough examination of her case and being assured that all her functions were normal, I examined her teeth and found sixteen amalgam fillings, several of them in teeth containing gold fillings. Believing this to be a case of mercurial neurosis I told her, and her mother who accompanied her, that the case put me in mind of what I had read in "Ziemssen's Cyclopædia" a day or two previous on mercurial poisoning, and I read to them, *viz.:* "Essentially the condition is characterized by great mental excitability of the patient to external impressions. Every unexpected or perplexing event excites him in the highest degree. The visit and the conversation of the physician put him into a state of complete bewilderment, even to syncope; the adult patient grows pale and stammers in answering the simplest questions. To perform his allotted task requires the greatest effort, or is even impossible if he sees or thinks he is being watched. There is also great solicitude and a feeling of anxiety without any reason for it. There is sleeplessness, or sleep which is restless, frequently broken and disturbed by frightful dreams, headache and palpitation. In the severer forms there are frequently hallucinations, usually of a frightful nature. When perplexed or excited, traces of

tremor are often perceptible in a slight twitching of the muscles of the face at the corners of the mouth." Having heard this, she remarked that it was a perfect description of her case in every particular, except that she had not had the hallucinations there mentioned. Following my advice the fillings were removed and the young lady has improved very rapidly to the present time, all her nervous feelings having disappeared. Indeed, her mother tells me that she has manifested none of her nervous troubles since the removal of the fillings.

In February, 1897, was called to see Mrs. N., who was extremely nervous, with neuralgic pains in the chest and palpitation of the heart. Upon looking up she felt as though she were falling backward. Had heaviness of limbs, loss of memory, and found it difficult to think and harder still to put her thoughts into words. Numbness of hand or foot, a sensation of floating, and a feeling that she would die, were common experiences. I did not see her many times before I examined her teeth and found one large amalgam filling in a lower molar, which I advised her to have removed, but doubting its necessity she kept it until November. Here I wish to read a letter sent me several weeks ago:

"Dear Dr. Tuthill:

"I wonder if there is another woman in this world who has had all the peculiar feeling that I have had within the past two years? You know that I am one of the healthiest-looking mortals, have good appetite, sleep fairly well, etc., yet for all this time I have suffered from such awful feelings. I was afraid to go out alone, or be alone, and in constant fear that something dreadful was about to happen. I suffered much from palpitation. Sometimes, when sitting in a street-car, the people would suddenly begin to look queer, the car crooked, and I would look around at each one to see if any one realized the dreadful condition of things. I had also light, floating sensations, and at times it was hard to talk, to think, and speak in sentences. When lifting my eyes upward I felt as though I were falling backward. Then my limbs were so heavy, my memory seemed to be gone, and I often felt dazed. Even when conversing with friends, or sitting at the dining-table, such a horrible feeling would suddenly seize me and I thought that in a moment I might fall down dead. I became hot and cold and sick, and would have to rise and walk about till it passed over. The feeling that I was just about to die often came to me with sensations that I cannot describe, but such as I should imagine a person dying would have. It began at my

feet, a numb, cold, creeping feeling, and I seemed to be hardening all over. Two or three of these spells I would have in a day, lasting from ten minutes to half an hour.

"You told me last spring that if I would have an amalgam filling in one of my teeth removed, a large part and perhaps all of these nervous troubles would disappear. But it seemed so absurd to me that I hardly gave it a thought till you urged it again this fall. While my husband was in one of the Western cities he happened to be in a large Dental Association and asked the President if he had ever heard of amalgam fillings causing nervous troubles. He replied, 'Yes, we have. It is not common, but some people are poisoned by the mercury, as I can prove,' and then cited the case of a man in that city who was a nervous wreck, given up by several physicians. At last one doctor said he believed him to be suffering from mercurial poisoning, and, upon examination, found seven amalgam fillings in his teeth. They were removed and from that day the man began to improve, and is a strong, well man to-day, scarcely knowing what a nerve is.

"So my husband wrote to me to take your advice and have the filling removed. I did so about two months ago. Immediately I felt better and coming home felt as though I could have walked to Beersheba and not have fallen. My buoyant feelings have not lasted, however, and some days I am almost discouraged. But I know that I am better. I have not had one of those awful dying sensations, nor do I have nearly so much of my nervous troubles. I can go downtown and to New York and do many things that I could not do before I had the amalgam filling out. Still I do have days of some of the old feelings and fears, but they pass away more quickly. I am living in hopes that it will be as you said, 'They will all be gone to stay away, in time.' But as the filling was in two and a half years, I could not expect to be cured in two months.

"Oh, Doctor, how I wish that I had taken your advice last spring and saved myself the sufferings of the summer and fall! I wish I had never had it put in my mouth. No dentist could put in another for any amount of money. I want to thank you with all my heart for insisting upon my having that filling removed and bringing brightness again into my life. Days when I feel well I am the happiest woman living. I only long to feel entirely well, and trust as the poison passes off that I shall.

"Very gratefully yours,

"MRS. N."

In July last I was called to see Mrs. H., aged twenty-six, who was in a very excitable condition, afraid to go out alone in the street or stores lest she become unconscious and be taken to some hospital. Upon looking up she felt as though she were falling backward; when looking down, as though falling forward; when standing still, as though she were going to pieces; when lying in bed, as though floating toward the side wall; when sitting in a chair she often felt as though she were dead all over, and that it would require the greatest effort to make any movement. Her troubles began in the fall of 1895, with pains in the back of her neck and about the lumbar regions followed by pains in her left thigh and arm, which would last from a minute to one or two hours and then pass off to reappear there or elsewhere at irregular intervals. In the spring of 1896 she complained of stiffness of the jaws, of her left hand and foot going to sleep, with continued numbness of the third finger of the left hand. The left side of her head and the left ear would often become numb. The large toe on the right foot would be numb for weeks at a time. She also complained of her limbs being heavy, like lead, and at times it was difficult for her to raise them. There was loss of memory, the eyes looked dull and heavy, the skin had a dingy look which washing did not improve. Feelings of dread and fear lest some calamity might befall her, made her afraid to stay in or go out alone, which she had ceased to do for more than a year. I treated this lady for several weeks without making any progress on the case. Then I examined her teeth and found nine amalgam fillings, which I believed had more to do with her condition than anything else. I therefore advised the removal of the fillings and that they be replaced with gold or bone. The work was done. In less than a week she began to improve; in three weeks you would hardly have believed her to be the same woman. All her symptoms have abated; the numbness, the heaviness of limbs, the constant fear, the falling tendencies, the stiffness of jaws, have disappeared, and she goes out alone. There is a buoyancy and vivacity in her manner which shows that her hopes and anticipations are bright. Her skin looks clear and healthy, her eyes sparkle with expression, while her memory is true to her as in former days. Since the removal of the amalgam she has gained twenty pounds in weight. I might say in passing that nine physicians had treated this case before it came to me.

I might describe several other cases, in one of which the fillings were in between twenty-five and thirty years, and the toxic

effects manifest for a dozen years; but those already given are a sufficient illustration.

Members of the dental profession who are so freely using amalgam tell us that over the surface of each filling there is an oxidation which prevents any possible absorption of the mercury. Fillings which have been removed are bright, where in contact with the cavity, indicating that this oxidation occurs only to the exposed surface and not to that which comes in contact with the structural parts of the teeth. The circulation in the teeth is continually in contact with the unoxidized surfaces of the amalgam and constantly receiving some mercurial taint which is carried throughout the system. As the nerve-centers are most impressionable to its toxic effects, we find neurasthenic conditions chiefly resulting.

It is not my purpose at this time to indulge in theories as to how these results follow the use of amalgam, but to merely state the facts. While many having these fillings seem to be exempt, others suffer from the subtle effects of the mercury. This is clearly proven by the cases I have cited, which have come to my knowledge during the past two years. So long as the system keeps in vigorous condition many feel no ill effects of the poison, but when from any cause it falls below par, either from over-tax or from disease, the toxic effect of the mercury becomes dominant, with those susceptible to it, and gets the mastery of the nervous system, to be followed in many cases by the train of symptoms mentioned above.

Although the number of cases may be comparatively few, they deserve as thoughtful consideration as would be given the subject if mercurial neurosis were more common. I doubt not that our insane asylums have many an inmate because of a mental state developed by amalgam fillings, which produces excitation or sluggishness of brain, impairs thought, destroys memory, blunts perception, and relegates to despair what otherwise might be a bright and brilliant career.

To insist upon a patient's enduring the agony, torture, and expense of having these fillings changed for gold, requires considerable nerve, with positive assurance of a correct diagnosis, for in case no improvement should follow the physician would be a subject for wholesale condemnation, and branded as a crank. Fortunately for the writer, in no instance has he advised the removal of these fillings where a marked improvement has not followed in a few days. It would be unreasonable to expect the

relief to be complete and immediate, for the removal of the fillings does not remove the mercury which has been gradually absorbed into the system during months and years of contact with the amalgam, and which has seriously affected the nerve-centers. But it does stop the supply, and when that is cut off there is an abatement of all the more prominent symptoms, followed by a marvelous improvement, and the patient realizes that he is living under new conditions, with hopes and aspirations he has not known for long months and perhaps for years past.

For the conscientious physician the obscure and unsuspected causes of disease have a peculiar interest, and he will not allow prejudice to prevent a careful investigation of the facts which may reveal such causes.

If this paper shall but stimulate some present to a more earnest study of this subject it will have fulfilled its mission and put into motion a train of thought which must eventually secure to many a now hopeless sufferer a relief so great as to be almost the beginning of a new life.

DISCUSSION.

R. C. Brewster, D.D.S.: When our President asked me to take part in this discussion, and told me that I would be allowed ten minutes, I determined I could cover more of the enormous ground involved, and in a more connected manner, if I should read what I had to say.

History.—About the year 1826 M. Traveau of Paris, France, advocated the use of what he called "Silver Paste" for permanent fillings in teeth. This metallic preparation was first brought to the notice of the dental profession in the United States about seventy years ago through the advertisements of two Frenchmen by the name of Crawcour.

It was called by them the "Royal Mineral Succedaneum"; succedaneum, a replacer or substitute, a name which is indicative of fraud and which consequently stamps the adventurers as unworthy of professional respect.

It was soon proven that instead of being a mineral compound it was purely metallic, and consisted of silver and copper rendered temporarily plastic by the addition of mercury. It was easily manipulated, and they were enabled to fill a class of largely decayed teeth with frail and broken cavity walls such as had never been attempted by the most skilful surgeons.

Scientific investigation at last was imperative, and, as a result, the foremost men who had been arrayed against it now became

its ardent supporters. Professor Elisha Townsend, one of the best gold-workers of his day, and President of the American Society of Dental Surgeons, found that the cry of mercurial ptyalism was not supported by fact.

This investigation gave birth to an organization called "The New Departure Corps," and was composed of the following gentlemen: Professors Henry Morton and M. B. Snyder, scientists; Messrs. Jacob B. Eckfeldt and Patterson Dubois, assayers of the Philadelphia Mint, metallurgists; Drs. S. B. Palmer, Henry S. Chase, and J. Foster Flagg, dentists. The work of this organization gave to our profession what is known as the new-departure creed, the most important deduction of their work being expressed in the following statement: "In proportion as teeth need saving, gold is the worst material to use."

These gentlemen did much to improve the formula for amalgam alloys and it has gone through successive changes until now we recognize the following to be as good in all respects as we can get: Silver, from 60 to 70; tin, from 30 to 35; and gold and zinc from 5 to 10. These are about the proportions. These metals are melted in a crucible and thoroughly stirred while in a molten condition, and then poured into a mold. After the mass has become cold it is cut into filling with a file and we then have the alloy.

To make an amalgam for filling a cavity the required amount of alloy is placed in one side of a pair of weighing scales, and an amount of mercury in the other sufficient to balance the scales. Both the alloy and mercury are now put into a mortar and very thoroughly mixed, after which all possible mercury is squeezed out through chamois with heavy pliers, and the amalgam is now ready for insertion into a *properly prepared cavity.*

An ordinary sized cavity will require 5 grains of alloy. After adding 5 grains of mercury and thoroughly mixing, 1½ grains of mercury can be expressed through the chamois, leaving 3½ grains of mercury in a filling of 8½ grains. This is in a cavity with entire walls. In cavities where contour fillings are required the amount of mercury will be slightly increased.

The object of putting an excess of mercury in the mixing, and then expressing the surplus, is to facilitate a complete and thorough amalgamation, while expressing of the surplus removes only the mercury, no portion of the other metals passing through the chamois.

Such a filling placed in a *properly prepared cavity* makes what

all dentists recognize as a good filling, and from which no mercury can be removed so long as it remains in the mouth. This, I believe to be the consensus of opinion of all scientific practitioners of dentistry throughout the world.

It is claimed, however, that the mercury *does* get out and is absorbed into the system, producing mercurial neuroses, ptyalism, etc.

If any of the mercury could be removed from such a filling it would no longer be a fit stopping for a tooth. It would be disintegrated, soft, and fall out, either by mastication or the tooth brush. We do not, however, find amalgam fillings acted upon in this way. Fillings that have done good service for thirty years are always as hard as the day they were inserted. The mercury *can* be removed by heat and by chemical affinity, neither of which can be produced so long as they remain in the mouth. The boiling-point will not eliminate it, and as the tissues of the mouth will not tolerate anything approaching that temperature, heat is excluded.

Chemical Affinity.—I am reminded here of a letter recently received from Dr. Bogus in which he says, in reply to my question about the action of iodids on amalgam: "I did not make any experiments at all relative to the systemic effects of iodin upon mercury which had entered the system from amalgam fillings in the teeth—perhaps because most of the patients for whom I had the honor of operating have not during my time been subjected to a dull red heat, which is about the temperature required to produce either of the two poisonous salts of mercury."

Messrs. Woodman and Tidy, in their work on "Forensic Medicine and Toxicology," make the statement that the following medicines have sometimes produced salivation: Bromin, arsenic, prussic acid, nux vomica, cantharides, digitalis, conium, opium, and particularly iodid of potassium; and in the face of all this the mercury in amalgam fillings is made to bear so great a burden.

Professor A. Winter Blythe, in his work says, in speaking of amalgam, that the mercury is in *too powerful a state of combination* to be attacked by the fluids of the mouth.

That serious consequences will sometimes follow the insertion of any filling material placed in the cavity of a tooth, I will admit, but such results are not due to the *nature* of the *filling material,* but to the *condition* of the tooth at the time of filling. The first of these are caused by the pressure of the filling on an exposed

pulp; the second is where a filling is inserted over a devitalized pulp; and the third is where the pulp has been removed and the canals not properly sterilized.

The results from this method of fillings are facial neuralgia, shock from thermal changes, pain on percussion, pericementitis, alveolar abscess and great cellulitis, elevated temperature, fetid breath, and excessive flow of saliva, with corresponding constitutional depression. When amalgam had been used in a filling of this kind, all these conditions were said to be caused by the mercury in the amalgam, but *anything* that will hermetically seal a cavity containing septic material, will, on true surgical principles, elevate the temperature, the same as an abscess without a drainage-tube or any cavity in any part of the body containing septic material with no outlet.

The question that is constantly asked of me is, "How great a loss of mercury is sustained by an old amalgam filling?"

This is most thoroughly exemplified by a wonderful series of scientific experiments, in a masterly work on that subject, and as the author of that book is in the room he will explain it far better than I can.

In a letter recently received from Dr. Jarvie he says, "I have practised dentistry for thirty-five years, and have yet to see the first case where injurious results have attended the *intelligent use* of amalgam."

Far greater than any series of scientific experiments can possibly be, is the fact that tons and tons of amalgam are used every year, and no injury has ever been proven to be caused by it.

In J. Foster Flagg's work on "Plastics and Plastic Filling," in looking for some scientific experiments, he says:

"I found reference made to the practical experiments of Messrs. John and Charles Tomes, in 1861 to 1872, which I had regarded as conclusive and had accepted as such. I found the term 'oxidization' as almost invariably applied to the discolorization of amalgam fillings, corrected by the acceptance of the long before urged, and much more reasonable hypothesis of 'sulphuretting.' I found a long list of elaborate experimentation with filled teeth and amalgam pellets, weighed with marvelous accuracy, placed in little bottles containing saliva acidulated with nitric, acetic, citric, or hydrochloric acid, and kept in a water-bath inside another water-bath at a uniform temperature—blood heat—for a period of three months, in order to prove by analysis of the saliva whether or not amalgam fillings would be capable

of producing mercurial ptyalism. I could not reasonably doubt the certificate of the Professor of Analytical and Applied Chemistry that the saliva contained no mercury in solution."

In speaking of the systemic effects, the author quotes from a discussion held in the Pennsylvania Association of Dental Surgeons as follows:

"Dr. C. N. Pierce, one of the professors of the Dental College of Pennsylvania, who opened the discussion, said in regard to amalgam ptyalism, that it was a thing of 'so rare occurrence that he believed the profession had never heard of but one practitioner who *thought* that that result was produced by amalgam.'"

Professor T. L. Buckingham said, "he had never seen a case of salivation and had doubts about its ever having produced ptyalism"; that MERCURIAL EFFECTS were "influences produced through the general system and he did not think amalgam fillings would produce these effects."

Dr. J. H. McQuillen said that "in an experience of fourteen years he could not recall a single instance of necrosis of the jaws, ptyalism, etc., of which others assert they have seen so many"; and that while he recognized the fact of idiosyncrasies in which the smallest quantity of certain medicinal agencies is followed by untoward results, and would not, therefore, offer his negative testimony as positive proof, yet "his own experience had made him look upon those who assert that they have seen so many cases with considerable doubt as to the value of their judgment or opinions as reliable diagnosticians."

Dr. C. P. Fitch said, "in regard to its toxical or injurious effects upon the system, he was inclined to question, if not wholly doubt, any such influence, and concurred in the views advanced by Dr. McQuillen, that he had yet to see the first case of alveolar abscess, ptyalism, etc., due to the presence of mercury in the amalgam."

Dr. J. M. McGrath testified for himself and for his father, who had had an amalgam experience of ten or fifteen years, that as yet "they had never seen any bad effects resulting, such as had been ascribed to its use by many practitioners."

Dr. Flagg says: "Thus it was that I was fortified by the combined testimony of gentlemen whom I could esteem as conscientious observers, and for whom I had much regard, both socially and professionally. It now remained for me to add the testimony of almost thirty years more of increasingly acute scrutiny (this book was written ten years ago), with the assertion that during

all of my amalgam experience *I have never seen one case* of mercurial ptyalism, mercurial periostitis, mercurial necrosis, or of the *slightest symptom which could reasonably be ascribed to mercurial action.* I have had cases of asserted mercurialization brought to me by the score. I have treated them experimentally with chlorate of potassium to demonstrate its utter impotency, and have then *cured every case* without the use of any antimercurials and have left the teeth refilled with amalgam. If anything more convincing than this is required, I have it not to offer."

The President: I have before me a very elaborate series of experiments on "The Physical Properties and Physical Actions of Dental Amalgam," by E. A. Bogue, M. D., D. D. S., of New York, now known as Manhattan. If Dr. Bogue is present we should be very glad to hear from him.

Dr. Bogue: In the first place, the dentine of the tooth has a circulation like a vegetable, and only that; the cementum of the tooth has a circulation like bone; the enamel, I need scarcely say, is akin to crystal. It is plainly stated in "Wood's Therapeutics" that minute doses of mercury increase the weight and increase the number of red blood-corpuscles. So far, therefore, from being detrimental, it would seem that a thirty-eight-years' wearing of amalgam fillings ought to have helped him. Perhaps it is that that enabled him to work eighteen hours a day! I do not see that such a supposition on my part would not be quite as susceptible of proof as the assumptions on Dr. Tuthill's part that these neuroses of which he speaks arose from amalgam fillings.

Then as to the power of mercury from amalgam to penetrate into the system. In the first place, the amalgam filling should be a chemical combination. It should not be a mere loose mechanical mixture. If it be a chemical combination, it is impossible to separate the mercury from the mass short of a heat very nearly approaching redness, excepting it be a dry heat. I did go through a series of experiments, which I have looked over to-night for the first time in twenty years, and I am ashamed of their elementary character, but at that time—in 1873—we knew very little of amalgam fillings. It so happened that two gentlemen then connected with Harvard University, and a third connected with the University of New Orleans, had written certain papers which were read and discussed. In the course of my experimentation I kept a whole handful of amalgam fillings at 100° F. for three months, in saliva, for the purpose of making not only the

test as to whether it were possible for mercury to be injurious systemically, but also for the purpose of finding out what the effects of certain chemicals were upon the teeth in connection with amalgam fillings. Perhaps, if I might be allowed, I will tell the reason that caused me to commence these experiments. A gentleman of great prominence in the now Greater New York placed his son in my hands for treatment and for a curious reason, as I supposed, declined to pay my bill. He sent him to some one else to have the amalgam fillings which I had put in taken out. This is history. It so happened I had not put any in. He then sent a letter from Dr. Metcalf, Professor of Theory and Practice at the College of Physicians and Surgeons, New York, to me, with the statement that the probability was that his son was suffering from mercurialism from the presence of amalgam fillings. That boy had but one amalgam filling in his mouth, which had been there a number of years—a tiny thing, about as large as a pin's head. I replied to Dr. Metcalf that the boy was not suffering from mercurialization but from chronic dyspepsia due to his inability to masticate properly—rather a saucy thing to say to a Professor of Theory and Practice. Dr. Metcalf took it kindly, however, and in a letter inquired of me whether it would not be possible for the emanations from amalgam fillings to produce systemic results. Thinking the question easy to answer I laid it by to the next day, and the next week, and in fact it was unanswered for twelve months, all of which time it took me, besides four or five hundred dollars in cash, before I was able to satisfy myself with an answer to that question. Then came the analysis made by Professor Chandler of Columbia College, in which, as has been stated, he certifies that there was no mercury to be found in any of the bottles of saliva, which for three months had been kept at 100° F. and contained, as I said before, a handful of amalgam such as dentists use. That report was made just after a little extract from the *Chicago Medical Journal* for July, 1873, had been put in my hands, in which was an article by Dr. Paine, in which he speaks of "the poisoning of thousands of people all over the world from corrosive sublimate generated in the mouth from amalgam plugs in the teeth; neither cholera, smallpox, or any malarious disease doing more injury in the world than this poison." That is broader and stronger than any statement that has been made this evening, and it was in answer to that and to Dr. Metcalf's very kindly question that these experiments were undertaken. I would only add that it is quite possible to elimin-

ate mercury from amalgam fillings when they are dry, but when they are under saliva, or under water, it has not been found so in three-months' time.

Dr. E. H. Babcock: I have been in practice for a number of years and have been looking for these cases of salivation. I saw last October a case that I thought was a typical one, but every filling in his mouth was gold. I saw another case only last month and that man did not have a single filling in his mouth; so I hardly think that can be charged to the amalgam. The statement was made that amalgam fillings when removed are found to be bright on the side which comes in contact with the walls of the cavity. I think you will find they are as perfectly oxidized there, or "sulphuretted," as they are on the outside.

Dr. A. C. Brush: Mr. President, either mercury produces, when absorbed from the teeth, an entirely different clinical picture than when absorbed from the other parts of the system, or there is a discrepancy in Dr. Tuthill's cases. As he read them off they reminded me more of miscellaneous cases of neurasthenia and hysteria than anything else, and the rapidity with which they changed their character from time to time; the variability of the symptoms and the extreme rapidity with which they got well, even after existing for years. A mercurial poison which has existed for years almost invariably produces a continuous tremor, due to the deposit in the nervous system and accompanying sclerosis. Had these cases lasted for so many years there would have been the production of some organic change there and the condition would not have cleared up so quickly. I think the last speaker is quite correct regarding the element of mind-cure. I think that was the potent element which produced the cure in those cases.

Dr. Tuthill: We all admit that there is a circulation in the teeth which may be the means of carrying the poison through the system, and this kept up for weeks, months, years, and decades, the system will feel the effect of this poison. I tell you, gentlemen, no one knows the direful consequences if he has not been there himself. Of course I am more interested in this subject, for it came near costing me my life.

I have often thought how the fathers in dentistry wrought well when they fought to the bitter end this subject of amalgam fillings; how they wrestled on the one side to prove it harmless, and on the other to expose its treachery and condemn its use. The struggle lasted from 1841 to 1847, when in the New York

Dental Society all who had not pledged themselves not to use amalgam were obliged to resign or were expelled. Those who had been the best of friends became bitter enemies. I hope that the same conscientious feeling which prevailed then will prevail again.

Dr. Brockaway: I would like to say a word on that point. I think at present there is hardly a dentist in practice in the entire world but habitually uses amalgam; they have all overcome their prejudice to it. There is no more danger of that fight being renewed than of any other absurd thing.

Dr. Tuthill: I do not claim for this peculiar effect of mercury that you get salivation. There is no ptyalism present; I never saw it in one case, but, as I said in my paper, there is a peculiar action upon the nervous system. The theory that recovery was due to mind-cure is too absurd for consideration in connection with the cases I have cited. I have seen people who would get well on that theory, but I am sure that does not hold in these cases.

THE TREATMENT OF INCOMPLETE ABORTION IN UNFAVORABLE SURROUNDINGS.

BY WALTER J. CORCORAN, M.D.

Read before the Brooklyn Gynecological Society, April 1898.

The title of the paper of this evening is the treatment of incomplete abortion in unfavorable surroundings. To speak dogmatically on this subject before you, gentlemen, would be much like bringing coal to Newcastle. I have nothing new or original to offer in regard to the scientific treatment, but as I consider the mission of this Society to be twofold, *viz.*: the advancement of our own art and the exposition of that art to others who are not laboring in the same field, but who accept and act on our conclusions, I intend simply to narrate my own methods, to describe the technique, if it is allowable to use so dignified an expression; to invite, first of all your criticism, and then to ask you for your own experience and methods; not doubting that the combined result will be of value to the practitioner who only too frequently is obliged to meet this condition with little or no assistance and under conditions that almost prohibit good surgical work and

will, moreover, enable him to preserve the life and health of his patient with the minimum amount of personal drudgery.

The treatment of an incomplete abortion, whether the prominent demand arise from hemorrhage or sepsis, in a modern hospital, with its well-equipped operating-room, its school of trained nurses and its medical staff educated and accustomed to the work, or the treatment of such a case in a private home, where there are means sufficient to procure the necessary assistance and surroundings, is one thing. To care for such a case in the home of the poor man, who has but his day's pay for his daily bread, with the housekeeper for the patient, with no assistance, and in the most unfavorable surroundings, is an entirely different matter. And yet it is just this class who manifest an unusual predilection for the multiplication of the species and the accidents attendant thereon, and who positively refuse, or are really unable to avail themselves of the advantages of our public hospitals. They must be cared for, and it is not the specialist but the plain doctor who must assume the task. There is another point in consideration which is not the smallest. The financial recompense is little, often nothing. The medical profession has more than its share of charitable work, and cheerfully gives it, still all that we can save in the amount of personal labor necessary to the welfare of the patient, is so much gained to a life which at its best is one of exhausting labor and wearing anxiety.

Such are the considerations that induced me to bring this subject before you, and it is from this standpoint only that I have considered it. The simplest way of presenting it will probably be the narration of a sample case.

In December last I was called as a matter of charity to see a woman who was greatly in need of a doctor, and not possessed of sufficient of this world's goods to be able to exercise much choice in her selection. I found on my arrival one room containing several small children, but little other furniture, and a woman well nigh exsanguinated from long-continued hemorrhage, the result of an incomplete abortion. There was, however, an affluence of dirt and filth, better imagined than described. The advice given was, of course, that she should at once be removed to a hospital and receive proper treatment. This was at once and positively refused. So I promised to return in the afternoon and do for her what I could, only requesting that they should have ready the assistance of some of the neighbors, a supply of boiling water, and obtain a fire-shovel

and clean out the sink. On returning I procured a large dish-pan, in which the instruments were placed. These were then covered to a good depth with boiling water poured from the tea-kettle, and the pan placed on the floor. The patient was then placed on the uncovered kitchen table, uncovered, for the reason that the bare wood was less dangerous than any accessible covering. Two ladies who had volunteered their assistance were requested to hold the patient's limbs and themselves out of the doctor's way. My hands were then scrubbed under the tap with running water, a packet of sterilized gauze was opened and laid beside the instruments on the floor. One more scrubbing of the hands and to work. By this time the boiling water which had covered the instruments had cooled sufficiently to allow them to be fished out when wanted, and this was the only fluid used. The cervix was then rapidly but thoroughly dilated, placental remains removed by the curette, the uterus swabbed out with sterilized gauze, and then packed with gauze, which was allowed to remain, while an applicator which I will afterward show you, was filled with a compound iodin paste. The gauze was then removed and the applicator introduced to the fundus, and the paste slowly expressed, so that it would come in contact with, and smear over every part of the endometrium, paying particular attention to the cornua, this process occupying from two to three minutes; the vagina was then loosely filled with iodoform gauze, and with the exception of one visit, to remove the gauze on the following day, this was all the treatment the patient received. She reported at my office in about one week, perfectly well, except for the weakness and anemia consequent on the loss of blood. This was not a dispensation of Providence, but has been the uniform result in a large number of cases treated in the same manner, under similar conditions.

This description may seem to be too trivial to bring before a body of this kind, accustomed to the highest exposition of the surgical art, but if you will remember that I am speaking over your heads, and, I hope, through the help of your discussion, to the large body of hard workers who every day are compelled to meet and care for such conditions, we may succeed in simplifying the necessary labor, and minimizing the danger attendant thereon. There is no operation on the female genitalia so commonly and frequently performed by incompetent hands. The resulting sequelæ of perforation, sepsis, and extensive pelvic inflammation, are familiar to all of us. I no not mean to insinuate

that such cases require the aid of a specialist. On the contrary, they peculiarly and entirely belong to the family physician, and he is the one who of necessity must care for them. But the operation is not simple and easy, or one to be recklessly undertaken. The puerperal uterus is friable, soft and flabby like a wet dish-rag, and the hand that presumes to encroach upon it must be familiar with the dangers and possibilities of such interference.

The points, therefore, which I would like to emphasize, are:

First, the operation should be as aseptic as possible, that goes without saying, but the man who goes to our text-books and publications for help to this end, will throw up his hands in despair under the conditions I have described. It is simply impossible to do a strictly aseptic operation, as there expounded, without an expenditure of labor which will convert the attending physician into a combined scrub-woman, nurse, doctor and chambermaid, and not exactly a waste, but a loss of time which the busy practitioner cannot afford. The method described is practically aseptic, the one danger being in the possible introduction of infection from contact with the external genitalia and the surrounding parts. You may say: "Why not include a scrubbing process here?" For two reasons: first, that a subsequent procedure renders it unnecessary, and secondly, that I believe it futile to attempt a cleanliness which we cannot make perfect. Perhaps I am preaching heresy; it certainly is not scientific, but I still believe from practical experience, that it is dangerous to induce an acute cleanliness, which we are unable to maintain or make perfect. If you start, you must finish.

Second, the germs that may possibly be introduced from this source are destroyed, or certainly prevented from multiplying, by the iodine paste. To give credit where credit is due, I wish to say, that this method of intra-uterine medication is after the formula and practice of Dr. John Byrne; the applicator is also his. I believe that he, many years ago, demonstrated the comparative innocuousness and the greater benefits derived from the intra-uterine application of medicaments in the form of a smooth paste as distinguished from those applied in fluid or solid form. This fact has certainly been borne out by my own observation.

The formulæ are as follows:

1. ℞ Iodini
Potass. iodid } aa
Acid carbolic. }
Glycerin. }
Tannin, q.s. to make a smooth paste.

2. ℞ Iodini
Potass. iodidi
Ext. ergot.
Glycerin. } aa . . . ʒ iv
Pulv. gummæ acaciæ }
Acid salicylic. . . . . ℥ i
M. S. To make a smooth paste.

The second formula I have added because I have found it especially useful in the treatment of subinvolution and chronic endometritis, the result of unsuccessful primary treatment in the condition under discussion.

The paste is first pushed out of the applicator at the fundus, paying particular attention to the cornu, and by a rotary movement, with slow but steady pressure, applied to every part of the endometrium. It is allowed to remain in the uterus. While there is no obstacle to its escape through the dilated cervix, its consistence retains it for quite a long time in contact with the diseased membrane. Its action is readily seen from its composition. It not only destroys any infection, but effectually seals the absorbents.

Third, the after treatment is simply "hands off." There is no irrigation, intra-uterine or vaginal. It might be desirable to wash the discharges from the vagina, but every introduction of the nozzle of the syringe under such circumstances, to my mind, is more apt to infect than to clean.

Fourth, we accomplish a great saving of time and labor, both of which are reduced to a minimum. This fact, in connection with the one that the results are uniformly good, is of no little importance when the compensation is little or nothing.

Fifth, when we are obliged to see these cases in consultation with men untrained to surgical work, we do not fear the possible after-infection from hands unaccustomed to our aseptic preparation, when left in charge of the case.

So far it may be noticed that I have considered only cases which were originally free from sepsis. In the treatment of puerperal endometritis in proper surroundings, we can recognize and adapt our treatment to the different conditions of sapremia

and septicemia; of distinctly local and removable infection, and a general systemic infection beyond the reach of local treatment. In the surroundings in which we are treating our patient, the methods of relief can be but very simple, and can go little beyond the procedure already outlined. In septic puerperal endometritis occurring before the end of the third month, the decidua should be entirely removed, and I believe with the sharp curette. The iodin paste will then, when applied in the manner described, attack the islands of diseased mucosa which are left after the use of the curette even in the most skilful hands, and complete the work of removing the source of systemic intoxication. The results will be uniformly good. I cannot recall a case of sepsis remaining after such an operation as I describe, when the patient was not already the subject of general septic infection. This may seem to be a broad statement, but made as it is from memory, without records, I believe it to be true.

When we advance to the third month and beyond, and the size of the blood-vessels and lymphatics also increases, their ability to absorb virulent products is proportionately enlarged. Under these circumstances I am very much more gentle in the use of the curette. I have never been able to use the so-called blunt curette with any degree of satisfaction, but I do use a curette with rather a dull edge, decidedly not a cutting edge, in order that I may remove as much as possible of the necrotic tissue, without injuring the protective wall which Nature has thrown between the sound and the diseased tissue.

I endeavor to avoid opening up new channels for absorption by undue violence. It is in such cases that the careful use of the curette determines the result, whether the patient be benefited or made decededly worse, and here I believe the action of the iodin paste to be of advantage through its antiseptic qualities, but principally by closing of absorbents carelessly reopened by the curette.

We have another class of cases, where there is no removable source of infection, where there is not putrid infection, but an invasion of the more virulent organisms, which, more rapid in growth and absorption, are swept beyound our reach. Where even irrigation is followed by chills and exacerbation of fever. In these cases the surgeon's aid is powerless, and we can but trust to medication, which generally consists of a trust in a merciful Providence, and a liberal supply of whisky.

This brief text, gentlemen, is all I have to offer you. I trust

that the importance of the subject, trite though it may be to you, but of exceeding interest to the vast majority of our co-workers, and the opportunity for criticism which I have given you, will induce a discussion which will round out a hurriedly and very imperfectly prepared paper. The fault is mine, and the more humbly acknowledged since I have always claimed that this Society is entitled to the best effort and ablest work of the fellow, who in his turn claims its attention.

301 Clinton street.

For Discussion, see page 508.

MALIGNANT NEOPLASMS OF THE NOSE, ILLUSTRATED BY A SPECIMEN OF CYLINDROMA.

BY WILLARD G. REYNOLDS, M.D.

The tumors, sarcomata, and carcinomata are so well understood by all, that a few general statements in regard to them will be sufficient.

As elsewhere in the body the cause of the beginning of the growth is usually unknown.

The history of sarcoma limited entirely to the nose is not at all common.

While it is a very difficult matter to prove, yet there are cases of sarcoma which apparently sprang from some irritated point in the nasal passage.

As the rubbing of a polyp against the septum or turbinated as it was moved to and fro by inspiration and expiration, Hagëk of Vienna holds to this view and cites some cases.

Sarcomata are generally found in people under the age of 40, and are usually of slow progress.

As much of their tissue is usually lymphoid they are in consequence quite vascular.

Hemorrhage is not infrequent and the odor which is generally present is due largely to the decomposition of the natural secretion which the growth prevents from escaping.

Bosworth states that they are always pedunculated.

So that a vascular tumor of a bluish-gray color freely movable should always be regarded with great suspicion.

They are by no means universally fatal, and some authors state that at least fifty per cent. of the cases may recover.

If the growth is not too large and the pedicle easily reached one may operate by a cold snare through the natural passage.

The bleeding is often excessive and the operation must be performed rapidly, but after the growth is removed the hemorrhage can be easily controlled.

Much of the success for a complete cure is the careful watching of the place of growth and any tendency to recur must be promptly checked.

Of course, here as elsewhere, the microscope will remove any doubt as to nature of growth.

In some advanced cases a microscopical examination of the blood may aid in the diagnosis.

The anema in sarcoma is never so pronounced as in carcinoma. A pernicious form of anemia is very rare.

If leucocytosis is present it is always mononuclear and not polynuclear. Nucleated red blood-corpuscles are only present if metastasis of the marrow of the bone has occurred.

A persistent leucocytosis points to suppuration or malignant disease, but the absence of leucocytosis does not exclude malignant disease.

Carcinoma confined entirely to the nose is rare, and pathologically does not differ from similar growth elsewhere in the body.

The only cause that is based on fact is heredity.

It usually occurs in people past middle life, as a rule, but little pain, frequently but slight hemorrhage, but an acrid serosanguinolent discharge is present.

Best to remove a piece for examination by any method which will produce but little irritation. The prognosis bad and the tumor usually runs a rapid course.

The early history of the patient from whom this tumor, cylindroma, was removed was very uncertain.

Dr. Philleo requested me to see the case with him.

The patient was a German woman unable to speak English, about 65 years of age.

It was difficult to get the previous history, she had been complaining of very severe pain in the head, the breath very offensive, and a stinking discharge from the nose.

The pain had been so severe that it was necessary to give much morphin.

At the time I saw her she was unable to get out of bed and a thorough examination was impossible.

I removed some dead bone from the nose—a portion of the

lower turbinated. We advised removal to the hospital, as she could not obtain proper treatment at home.

The chances for a successful operation were very few, but it was necessary that something thorough should be done at once. The operation was performed by Dr. W. C. Wood at St. Mary's Hospital.

He did the Ollier's operation in which the nose is freed from its attachment, by separating the nasal bones and the nasal processes of superior maxillary from the frontal bone and the nose turned down so as to leave the nose entirely exposed.

Much necrosed bone was removed and it was found that the tumor had also invaded the ethmoidal cells. As much bone and tumor as possible was removed in the limited time, for the patient was weak and hemorrhage quite severe.

She died in about two days of shock and meningitis.

The tumor was examined by Dr. H. P. de Forest, who gave the diagnosis of cylindroma.

Pure cylindroma is quite rare and the literature on the subject so conflicting that I take the liberty of presenting this case.

Many text-books treating of diseases of nose, do not speak of this form of tumor at all.

Bosworth in his work on diseases of nose and throat in discussing carcinoma mentions cyclindroma, but he differs from all other writers that I consulted, for he says, it can hardly be called malignant, and if operated upon in time rarely returns.

Delafield's and Prudden's pathology places it under endothelioma or endothelial sarcoma.

Under this general grouping are arranged a number of tumors, which on the one hand are closely related to the sarcomata in genesis, and in some cases in appearance, but on the other hand some of them are difficult to distinguish from carcinoma.

The endothelioma springs from the endothelium lining lymph-vessels and lymph-spaces.

Sometimes these cells resembles closely the normal endothelium but at other times are very different.

He goes on to state that the stroma may undergo hyaline degeneration in places, cylindrical in appearance, and that these cylinders are often closely surrounded by layers of cuboidal or flattened cells. But he leaves the subject in rather a doubtful situation.

Thomas' pathology deals with the subject in a very general

way. He says that sarcoma which has undergone hyaline degeneration is called cylindroma.

He makes it still more indefinite by stating that "under this name, however, adenomata, sarcomata, carcinomata are described, distinguished by hyaline cords, clubs, sphere." But again he makes a sharp distinction by stating that some parts of a sarcoma may undergo hyaline degeneration in such a way that blood-vessels surrounded by sarcoma cells are found in the hyaline masses, and in some cases the hyaline degeneration affects the adventitia coats of the capillaries, especially while the sarcoma cells remain intact.

Ziegler puts them under sarcoma and states that there may be mucoid as well as hyaline degeneration. He later says that a part at least of the cylindroma are to be placed with the angiosarcoma, characterized by hyaline degeneration.

Waldeyer calls it plexiform angiosarcoma, which is really an endothelial sarcoma, and because of the hyaline degeneration are called cylindroma. He further believes that the endothelioma arises in some cases from endothelium of blood-vessels, sometime from endothelium of lymphatics or from connective tissue.

Meckel and Voltman hold the view that the tumor springs from connective-tissue cells.

Busch and Koester believe that the cylindrome bodies originate from lymph-vessels.

Von Recklinghausen has described a combination of cylindroma with small round-cell sarcoma.

Neumann has found it associated with adenoma.

Heschel, Mecket, and others have found it combined with chondroma.

Bier-Hierschfeld has observed a primary cylindroma arising in the dorsal vertebræ with secondary deposits in the canal.

The growth of cylindroma is not, as a rule rapid, and it may grow to considerable size. For example, originating in the orbit it has penetrated into the nasal cavity and into the antrum of Highmore. It is characterized by a strong tendency to local recurrence.

In a case of cylindroma of abdominal cavity, secondary nodules have been found scattered over the abdominal organs.

While metastatic changes are not common yet they may occur, and invade any part of the body.

Cylindroma is most commonly found in the orbit or in the

neighborhood of the orbital cavities and is very frequently found on the upper or lower jaw.

Cases have been reported involving the dura mater, lungs, etc.

Kuster calls attention to the following for differential diagnosis:

That there is hemorrhagic sarcoma or angiosarcoma which shows extensive degeneration of the walls of the vessels. A growth of endothelial cells and hyaline degeneration occurs before a tumor nodule has become developed. The tumor clinically is easily mistaken for carcinoma.

Billroth, Feurester, Kocher, Bier-Hierschfeld, and others have evidently worked in a more careful manner, and have arrived at about the same results.

The name cylindroma was first used by Billroth, because the characteristic features of this tumor are the peculiar cylindrical masses in which the cells grow and also the tendency to central hyaline degeneration of the cell masses.

It seems to originate generally from the cells of the blood-vessels, which lie next to the adventitia in both blood-vessels and lymph-vessels.

These cells surround the blood-vessels like a sheath, and as these cells continue to grow the lumen of the vessel may become occluded.

The reticulated anastomosing filaments and tubules of the cells usually lie in fibrillar connective tissue, and as a result of the hyaline degeneration of the walls of the vessels hyaline tubules are formed having cells in their interior and showing the interior completely degenerated into hyaline material.

Thus, cylinders or twig-like formations of hyaline material penetrate the cellular substance of the tumor.

These hyaline areas may be discovered as scattered when transversely cut, or as anastomosing twigs, representing the place of the former vessels when the section is made parallel with the cylinders. Sometimes the cells in the tubules are first attacked, so that the hyaline cords which replace the vessels are surrounded by cells not yet degenerated.

In some cases there is first a fibrinous degeneration of the blood-vessels replaced later by hyaline.

Some of these tumors have been characterized by peculiar strings of cells which formed a network of lymphatic channels.

This description of Billroth and others seems the most reasonable, in that these tumors take their origin from the walls of the

blood-vessels and that the cylindrical strings or branches originate in the hyaline degeneration and obliteration of the newly formed blood-vessels. And that the nodules originate in the offshoots or buds from the parent blood-vessel which has undergone hyaline degeneration.

NEW REMEDIES IN THE TREATMENT OF URETHRITIS AND MISSTATEMENTS ABOUT ELECTROLYSIS IN URETHRAL STRICTURES.

BY ROBERT NEWMAN, M.D.,
Consulting Surgeon to The Home in Yonkers, Hackensack Hospital, McDonough Memorial Hospital; Honor. Member Ulster Co. Med. Soc.; formerly Prosector, L. I. College Hospital, etc.

Read at the Fourteenth Annual Meeting of the Fifth District Branch of the N. Y. State Medical Association, held in Brooklyn on May 24, 1898.

Gonorrhea.—As a rule the usual treatment of gonorrhea has not been satisfactory. It needs improvement and more precision in regard to a cure, no matter whether it is a simple inflammation or an infection. Certain routine remedies have been used by everybody for a certain time and given up again. Killing the gonococci does not cure, discharges remain, become chronic and gleet follows. In the beginning, irrigations systematically carried out may cure, and army surgeons have had thereby decided successes in hospitals; but in private practice cases are not seen early enough, neither can the plan be carried out.

Strong injections, particularly nitrate of silver, in the deep urethra are injurious. They do not cure, but make matters worse by creating complications, as prostatitis, cystitis, inflammation of Cowper's glands, of seminal vesicles, epididymitis, urethral stricture, pyelitis, etc. Medicines administered internally may assist to allay the severity of an inflammation, but do not cure a discharge. Strong injections irritate, add fuel to the fire, and spread the disease to deeper parts. They are either too strong for healthy tissues, or may not be strong enough for certain diseased herds (isolated areas), neither is it sure to reach certain spots for which it is intended.

Dilatations by modern instruments cannot be tolerated or pain is caused by the force which must be used. Gradual dilatation may do good, but it is impracticable and will fail in the majority of cases.

Gelatin uretheal bougies, as also prostatic gelatin bougies, have done good in appropriate cases, if the medication is well selected and not used too strong. They are made by Dr. Chas. L. Mitchell in Philadelphia, who adds different formulæ to his catalogue. Medicora was added in December, 1897, and consists of zinc-sulph., zinc-iodid, fluid hydrastis, boric acid, creosote, morphin and cocain. Of late he has also made gelatin bougies with argonin, and others with protargol, and some with antinosine, which in New York are made for sale at J. Milhau's Son.

These last remedies deserve a passing notice as they have given better results and promise more than any others.

Argonin is a white powder, a new silver proteid, an albuminate of silver formed by treating sodium casein with silver nitrate and alcohol. It has been used as an injection or through the endoscope as a local application, also with a powder-blower as an insufflation. As an injection the favorite is a ten-per-cent. solution. The reports of its efficacy are all of recent dates, but come from so many different sources that it deserves favorable notice. The writer has used it with marked success and one advantage which it has is that it does not hurt or make stains on linen or skin. Among others, favorable reports have been made by the following practitioners: Dr. C. L. Miller of Lebanon, Pa., had 18 cases cured in about 10 days; Dr. J. J. McGovern of Milwaukee,* who read a paper before the Milwaukee Medical Society, says that he treated 25 cases of gonorrhea with argonin, examined the discharge with the microscope and found gonococci disappearing, and cures were effected in 13 to 15 days. Dr. W. Gaertner of Buffalo has used argonin for over a year in a large number of cases and in each instance has been much pleased with it. Similar good reports come from Dr. D. E. Blackman of Buffalo. Dr. Malcolm Storer of Boston† calls it an ideal germicide in vulvovaginitis in a paper read before the Suffolk District Medical Society, October 27, 1897.

Dr. F. P. Sprague of Wyandotte, Mich., has sent the notes of 17 cases; Dr. Geo. K. Swinburne of New York has written a lengthy paper in praise of argonin; Dr. J. Henry Dowd of Buffalo read by request a paper at a meeting of physicians at Buffalo‡ and promises a cure in 10 to 12 days. Dr. W. B. Murray of Osseo, Minn., praises argonin in gonorrheal ophthalmia. In an

* "Milwaukee Med. Jour.," March, 1898.
† Abstract from "Boston Med. & Surg. Journal."
‡ "N. Y. American Therapeutics," February, 1898.

editorial note* argon in isrecommended as an insufflation through an endoscope two or three times a week. Dr. Henry Jackson† of St. Louis uses a ten-per-cent. solution in gonorrheal vaginitis in children.

Protargol in the treatment of gonorrhea has been espoused of late. It is a proteid synthetical silver compound. It is stable in composition and contains 8.3 per cent. of silver, which is combined with certain proteids. Neisser‡ states that protargol is the best, the safest, the most rapid remedy for gonorrhea, as the gonococci are killed without effecting the mucous membrane. It is employed in the form of a weak solution from 1 to 3 per cent. Dr. E. Wood Ruggles‖ reports 15 cases cured in 3 to 4 days. Dr. Herman Goldenberg,§ speaking of 60 cases says that protargol surpasses all other agents hitherto used in the treatment of gonorrhea, that it is absolutely painless and unattended with any evidence of local irritation.

The Standard Chemical Co. (Dr. Chas. L. Mitchell), manufactures soluble gelatin bougies of protargol, one per cent., and recommends the same in the treatment of acute gonorrhea, for such cases they are made only three inches in length. The bougies have been used by me recently, but not enough time has elapsed in order to speak of their success from personal observation. Some specimens are here for examination of argonin, protargol, and antinosine. Dr. A. Darier¶ of Paris has used protargol in his ophthalmological practice, and says the result in severe catarrhal conjunctivitis has been beyond all expectations. Without the use of any other means a rapid cure was obtained.

Dr. Wentscher** has experimented with protargol in a considerable number of cases of gonorrhea with very satisfactory results, but needed for a cure 3 to 4 weeks. [Writer disclaims any responsibility for these reports, only mentions the same as received.]

Local Applications are more efficacious if applied to diseased parts only through an endoscope. The writer has used the endoscope for that purpose since 1864 with good results, particularly in chronic inflammations and granular urethritis. There are

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* "Cleveland Journal of Medicine," February, 1898.
† "Medic. Review," St. Louis.
‡ "Centralbl. f. Dermatol.," October, 1897.
‖ "Medical News," March 26, 1898.
§ "N. Y. Med. Journ.," Jan. 22, 1898.
¶ "La Clinique ophtalmologique," Jan. 10, 1898.
** "Allg. Med. Central Zeitg.," No. 9, 1898.

many endoscopes in use, but it seems the ideal instrument has not been invented yet, which is practical, without any fault and can be used as well for diagnosis as for treatment.

Irrigations are useful and fluids may be used for cleansing only or medicated as a germicide and for the purpose of abating the disease. The writer considers a siphon-irrigator as the best means for the purpose as it will irrigate every part of the urethra and bladder without introducing a catheter; the nozzle being not further from the meatus at the utmost than 1½ inches and the siphon arrangement will propel by gravitation and suction the fluid into any part of the urethra and bladder. Some irrigators, dependent on simple gravitation, often cannot reach the deeper parts on account of the resolute action of a spasmodic irritable bladder, and the writer has often seen that the spasm of an inflamed bladder will regurgitate water or urine into the reservoir 43 inches upward. Hence, he considers the siphon arrangement best as by pressing the ball and stopping the possible upward flow the fluid can be forced in any bladder under any circumstances.

Electricity in some form is often very useful as an auxiliary remedy and may be given as electrolysis, faradic or high-tension current or as a hydrogalvanism.

Urethral Strictures.—The success in the treatment of urethral strictures by electrolysis prompts one to confirm all that has been said in its favor, and to protest against the old method of cutting operations, which do not cure and which condemn the patient to regular introduction of sounds for life. Electrolysis is a fact, causing a chemical action, or better explained, a chemical decomposition, which as a fact is taught in all text-books on chemistry. The action has been shown often by the writer as a practical demonstration. In the treatment as an electrotherapeutic measure the law of electrolysis is, weak currents absorb, strong currents cauterize and destroy, tissues. The writer practised electrolysis with success in the treatment of urethral strictures for thirty years, and at intervals has published many reports, mostly in series of 100 cases, in which it was proven that "once cured" no relapse took place during many years, and the patients can be shown who have remained well for twenty-two years.

The Times and Register, Philadelphia, April 8, 1893, published 1755 successful cases operated upon and reported by 54 different physicians. The correctness of the writer's statistics have been verified mostly by documentary evidence, by patients and their family physicians, and lastly, by the thorough examination of a

committee, consisting of Drs. H. A. Goelet, W. J. Morton, and W. J. Herdman. These gentlemen have diligently investigated for a whole year and reported September 11, 1893, that "the records of Dr. Newman's cases and his conclusions were well sustained by the statistics—it is confirmatory of the value of the continuous currents in resolving a large class of urethral strictures." That report has been unanimously adopted by the American Electro-Therapeutic Association.

Pathological changes vary in urethral strictures and, if the condition of an altered urethra is trifling, other means may succeed, but if the infiltration of a submucous tissue is spread in a circle deeply seated around the normal caliber of the urethra, electrolysis promises better results as a curative measure as the statistics have shown. Medical opinions against urethrotomy multiply, and successes reported depend more on the completeness of the capacity of a urethral sound to keep open the caliber of the urethra than on the cutting. Gradual dilatation is an ideal procedure, but in many cases even force cannot cure a deep infiltration.

Scientific discourse on the advisability and possibility of the effect of electrolysis is desirable, but I object to misrepresentations, which some gentlemen have made for some reason or perhaps from misconception of the procedure. Some of their misrepresentations I take the liberty here to state:

1. Some assert that electrolysis does not exist at all, and one gentleman during the reading of a paper tried to show it by using a galvanic current on a piece of *dry* aorta of a calf, enclosed between sandwiches, as he called it. Of course there could be no action by electrolysis without moisture, and such an experiment as mentioned is against all fundamental laws of physics.

In a students' quiz series of questions and answers the possibility of curing an organic fibrous stricture by electrolysis is denied; also, the reliability of any report of cures of urethral stricture by electrolysis. That book was published in 1892. To such literature it is useless to make any answer.

2. In the *Am. Med.-Surg. Bulletin*, page 1452, December 1, 1895, it is reported that a surgeon stated: "electrolysis is a fallacy, has not been a success, that Newman's method of electrolysis *burns* away the mucous membrane as well as the stricture"—which statement is against all former reports and distinct instructions as to the modus operandi by the writer.

3. Then there was a statement that a current of five milliamperes

for ten minutes cannot cause a chemical action and has no effect.

4. While another critic asserts that such a current as I use burns the mucous membrane away through the strictures, cauterizes and destroys alike sound and pathological structure.

The answer is that it has been demonstrated often that the current *used* in *my* treatment does act and absorb, but cannot cauterize, burn or destoy.

5. Another says, after all it is only a gradual dilatation by the force used. My reply is that my rule is to guide the electrode, and force should never be used. The electrode passes the stricture by its chemical action of absorption. Further proof is that many times force tried by different operators could not advance any instrument, and at the same time, when experts could not push an electrode through the stricture, the *same* electrode without removing it from its situation passed all stricture and went into the bladder in three to five minutes with a galvanic current of four or five milliamperes.

6. Another statement made is, if successes have been reported, it was not a real but a spasmodic stricture. The answer to such an objection is that spasmodic strictures cannot be cured by the galvanic current. On the contrary it makes any spasm worse. It is a proof that the contraction was due to a bona-fide stricture if passed by a galvanic current. Only a faradic current can cure a spasmodic stricture.

7. Allusions have been made to the effect that reports were not correct, and one staff editor even wrote a polite letter to a man who had been dead four years in order to prove that the man did not exist and therefore could not have written a letter. My answer is that the gentleman's handwriting has been identified by a sworn affidavit, which is subscribed by a notary public, and the latter's standing and his signature certified by the county clerk, and most statements have been investigated and proven by documentary evidence.

8. Instrument-makers have made spurious electrodes and represented them as Newman's electrodes.

9. Such faulty instruments have been criticised and by intelligent men preferred to the genuine article under the impression they were "improving Newman's electrode."

10. Other methods have been established, called erroneously electrolysis, and have thereby injured the real practice of electrolysis.

These are some instances of the misstatements made to which

I object and will be pardoned for repeating *general rules* for the guidance in the treatment of urethral strictures by electrolysis, which have been given several times, as also in a paper read before the N. Y. County Medical Association, December 15, 1890.

1. Any good galvanic battery will do which has small elements and is steady in its action ; the twenty-cell battery, zinc and carbon elements, is an excellent instrument and sufficient for the beginner.

2. The fluid for the battery ought not to be used too strong.

3. Auxiliary instruments are important to the expert but not necessary for the beginner. However, a milliamperemeter to measure the current is now imperative.

4. For the positive pole a carbon electrode is used, covered, moistened with hot water and held firmly against the cutaneous surface of the patient's hand, thigh, or abdomen.

5. For the absorption of the stricture the negative pole must be used.

6. Electrode bougies are firm sounds, insulated with a mass of hard-baked rubber. The extremity is a bulb, which is the active part in contact with the stricture. Four varieties are now in use.

7. The curve of the electrode should be short; large curves are mistakes.

8. The plates must be immersed in the fluid before the electrodes are placed on the patient, and raised again after the electrodes have been removed.

9. All operations must begin and end while the battery is at zero, increasing and decreasing the current slowly and gradually one cell at a time, avoiding any shock to the patient.

10. Before operating, the susceptibility of the patient to the current should be ascertained.

11. The problem is to absorb the stricture, not to cauterize, burn or destroy tissues.

12. Weak currents at long intervals.

13. In most cases a current of six cells, or from two and a half to five milliamperes, will do the work but it must be regulated according to the work to be done.

14. The *séances* should be at intervals, not too frequent in succession, about once a week on an average; and each lasting from five to twenty minutes.

15. The best position for the patient to assume during the operation is that which is most comfortable to himself and to the

operator. I prefer the erect position, although the recumbent or others may be used.

16. Anesthetics I like to avoid; I want the patient conscious, so he can tell how he feels. Sometimes and exceptionally cocain may be used.

17. Force should never be used; the bougie must be guided in the most gentle way; the electricity alone must be allowed to do the work. Avoid causing hemorrhage.

18. During one *séance* two electrodes in succession should never be used.

19. All strictures are amenable to treatment by electrolysis.

20. Pain should never be inflicted by the use of electrolysis; therefore, it should not be applied when the urethra is in an acute or even subacute inflammatory condition.

21. The electrodes should not be greased with substances which are non-conductors and would insulate.

22. For ordinary strictures, the size of the bougie selected should be three numbers (French) larger than the stricture.

Since my method has become popular, some instrument-makers have sold an inferior and faulty article by the thousand, and very cheap. Some have even manufactured at random instruments which they sell as Newman's electrodes, for which I am not responsible, and deny most emphatically the parentage. I have seen many defective instruments with which nobody could perform the operation correctly. For such and many other reasons it is a wonder that more failures are not reported. Electrodes in which the metal bulb is screwed to the stem are always dangerous and should never be manufactured.

Particular attention is called to rules 5, 11, and 17, which will be an additional proof that some critics have misrepresented the advised method of electrolysis.

Such misstatements would occur less frequently if the medical profession had been educated by the colleges in physics and chemistry, and the medical colleges had incorporated in their curriculum "Electrotherapeutics."

On the other hand it is pleasant to notice, that many physicians have adopted electrolysis, that they practise it with success, and have written reports on it. Allow me to cite the concluding sentence from a paper on "Urethral Stricture and Treatment by Electrolysis" by Drs. Holladay and Burton, Hot Springs, Ark.

"The advantages of electrolysis in the treatment of urethral strictures may be thus enumerated. The operation cures. The

patient is not consigned to a 'bougie life' as after other operative interference. There is no loss of time from business. There is no hemorrhage, no urethral chill, no traumatism, no cicatrix, no incurvation of penis. The operation is comparatively painless and devoid of danger. No relapse."

The above statements are not the wild vaporings of an excited imagination, but sober conclusions formed from a long experience, a practical structure reared upon the rock-bed foundation of the eternal, unchangeable laws of physics and chemistry, woven by man's ingenuity into the applied science of electrotherapeutics.

New York, 64 West 36th Street.

A Guide to the Clinical Examination and Treatment of Sick Children. By John Thompson, M.D., Extra Physician to the Royal Hospital for Sick Children, London; Lecturer on Diseases of Children, Edinburgh School of Medicine. In one crown octavo volume of 350 pages with 52 illustrations. Cloth, $1.75, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

Dr. Thompson's book might be described as a work upon methods of study and diagnosis. It will be of use to senior students and to young practitioners who have not had opportunities for clinical study of pediatrics. It is a distinctly elementary work. It fills a place in pediatric literature hitherto unoccupied, inasmuch as there is no other small work which so exclusively deals with the physiology of infancy and childhood. That it deals less with treatment than with physiology and diagnosis fits it all the better for profitable reading by those for whom it was primarily written, namely the author's "classes of students and graduates who were attending the teaching of the Children's Hospital," and hence will be useful to those who are pursuing similar studies elsewhere. The illustrations are numerous and are of very excellent character. We can commend the frequent reference in the text from one part of the work to another.

It is not clear why the subject of sterilization of milk should be so fully described, when even this author points out in a mild way the objections to it. It should have been referred to only to state in definite terms the objections to it, while greater stress should have been laid upon Pasteurization of milk.

The chapter on therapeutics is on the whole very good, but the author adheres to some methods which are discarded in the nursery except where the old-fashioned nurse has sway. Poultices are better replaced by cotton jackets or fomentations; a mustard poultice "left on for six or eight hours" would either do great harm or would be of no more service than the "thick layer of cotton wool" which is to replace it. Blisters and depletion seem subjects out of place in a work of this character. The depressing effects of antipyrin should have been emphasized.

THE BROOKLYN MEDICAL JOURNAL.

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EDITORIAL.

NEW BUILDING OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

The laying of the corner-stone of the new building was an event in the history of medicine which those who were privileged to attend will never forget. It marks an epoch in the life of the County Society, the future results of which are incalculable. With such a home as the profession will soon occupy and with such a depository for its library, we look for a large increase in the membership and important accessions of books from those who have collections which they prefer to see placed where they are safe from destruction by fire for all time to come; that the Medical Society of the County of Kings has been brought to the high position it now holds among kindred organizations is due alone to the zeal and fidelity of its officers and councils; certainly it has in the past been greatly handicapped by the inadequate facilities it has afforded its members.

KINGS COUNTY HOSPITAL.

Plans have recently been filed for new wings and other important additions and alterations to this hospital, including a home for nurses and a pavilion for idiots. In a future issue we hope to be able to give a more detailed discription of an improvement which has long been urgently demanded by the profession and by all others who are familiar with the crowded condition of this institution and its needs.

DEFECTIVE SIGHT AND HEARING IN PUBLIC-SCHOOL CHILDREN.

The suggestion made by the Committee on Public Health of the Medical Society of the County of Kings that an examination should be made of the sight and hearing of the children attending the public schools of Brooklyn, has borne abundant and valuable fruit. During 1897–8, 50,000 children were examined, with the result of finding that nearly one-third had defective sight, hearing, or both. The parents of these children were notified, and the increased attendance upon the dispensaries has been most marked. Unfortunately, these institutions have no funds with which to supply spectacles to the poor, and to meet this want a fund has been established under the fostering care of the Brooklyn Teachers' Association, which has shown its great interest in the movement by contributing $150 as a nucleus of the fund, and by undertaking to solicit funds from those interested. This fund is to be drawn upon only by requisition from a school principal, endorsed by a physician who must certify to the worthiness of the case. It is estimated that $5000 will be needed. Contributions may be sent to Miss Jessie H. Bancroft, treasurer, Director of Physical Training in the Brooklyn public schools, at 131 Livingston street, Brooklyn.

DISPENSARY ABUSE.

At a recent meeting of the Board of Estimate and Apportionment of New York City, Dr. F. R. Sturgis opposed the granting of city funds to hospitals which maintained medical colleges or which were capable of self support by reason of endowments or other sources of revenue. In the list of those institutions which

he opposed were the New York Infirmary for Women and Children, the Hospital for Ruptured and Crippled, the Babies' Hospital, the Sloane Maternity Hospital, the New York Post-Graduate Medical School and Hospital, the babies' ward connected with it, the Lying-in Hospital, the New York Homœopathic Medical College and Hospital, the Mount Sinai Hospital, the New York Polyclinic Medical School and Hospital, and the New York Medical College and Hospital for Women.

OSTEOPATHY.

By reason of an editorial published in *The Medical Age* that most excellent medical journal has become the defendant in a suit for $25,000 damages. By this editorial it is claimed that osteopathy in general and one of its adherents in particular have been greatly injured. Physicians living in New York State, where the laws regulating the practice of medicine are designed to restrict it to those who are qualified, have little idea of the isms practised in some of the other States. We heartily sympathize with our contemporary and assure it of our hearty appreciation of its efforts to purify medical practice, and to drive from the field all who are unworthy and unqualified.

MANUAL OF THE DISEASES OF CHILDREN. By John Madison Taylor, A.M., M.D., Professor of the Diseases of Children, Philadelphia Polyclinic, etc., and William H. Wells, M.D., Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic, etc. Cloth, $4.00, net. Philadelphia: P. Blakiston's Son & Co. Publishers.

The authors of this work modestly disclaim for it the title of treatise, but yet it covers in a very satisfactory way the whole field embraced in its subject. The material is condensed and thoroughly up to date. We know of no more satisfactory manual than this one. It is not easy to particularize its excellent features, where there are so many. To mention one as an example will suffice; the chapter on diseases of the blood gives the clinical methods for the examination of the blood and its general pathologic changes, preliminary to the presentation of the special diseases. Another point worthy of special notice is the importance attached to massage and exercise, to which reference is made in a number of places. Eczema in its protean forms gives most practitioners much trouble in diagnosis and treatment: a useful and enlightening table of contrasts for differential diagnosis is given in the chapter upon diseases of the skin. The acute infectious diseases justly receive fuller discussion than any other division of the book. Physical development forms the subject of another important chapter. The general make-up of the book is excellent, except that the index is far too meagre.

PROGRESS IN MEDICINE.

OBSTETRICS.

BY CHARLES JEWETT, M.D., SC.D.

CAPILLARY DRAINAGE OF THE UTERUS IN POST-PUERPERAL ENDOMETRITIS.

J. Gouzartschik (*La Gynecologie*, June 15, '98). The author proceeds as follows: "The cervix is exposed by means of a speculum and steadied with a volsella. The uterine cavity is then cleansed with cheese-cloth sponges held in the grasp of forceps and is packed with gauze well wet with a 1:1000 sublimate solution. After a few minutes this is removed and the cavity packed lightly with iodoform gauze. A similar pack is placed in the vagina. The packing is renewed once in twenty-four hours for nine or ten days.

"In 115 cases treated in this manner only one was lost. The advantages claimed for the method are: (1) Ease of application. (2) Removal of necrotic material by adhesion to the gauze; and (3) the action of the plug as a capillary drain.

Irrigation and the curette G. condemns."

[Objections to the author's claims are that iodoform is not a reliable germicide and a gauze pack is not a drain. His method is doubtless better than the indiscriminate use of the curette at the hands of inexpert operators; yet in the presence of appreciable quantities of necrotic material the curette is indispensable. In the absence of necrotic tissue curetting is useless and often injurious. A most useful measure, as Pinard's experience has shown, is the intra-uterine douche repeated once or more daily. Its continuance is indicated so long as the temperature falls after it, and it should be repeated as soon as the temperature rises again. Tarnier's iodin water of a port-wine color is an excellent non-toxic irrigant. The procedure should be surrounded with all the aseptic precautions of a major operation.]

RUPTURE OF THE WALLS OF A GRAVID TUBE WITH FETAL CYST INTACT.

Labey (*Bull. de la Soc. Anat.*, p. 58, Jan., 1898). A woman forty-five years old was admitted to the Hotel Dieu, January 6th. There had been four previous confinements, the last of which had occurred at the seventh month. Two weeks before admis-

sion, her menses being then three weeks overdue, a profuse hemorrhage with clots had occurred. Pain and irregular bleeding had continued since.

The uterus was found large, quite movable, and not painful. The cul-de-sacs were free, except that a slight fulness could be felt in the right lateral cul-de-sac. Soon after the examination the woman became restless. Later she was seized with dyspnea and deep pallor. Her extremities became cold, the pulse feeble and rapid and death promptly followed.

At the autopsy the abdominal cavity was found filled with blood and clots. The right tube which had ruptured contained an ovum which was still unbroken. In it the embryo could be seen through the semitransparent membranes. The rupture of the tube was believed to have been precipitated by the examination, which, owing to a thick abdominal wall, had been difficult and unsatisfactory.

THE VALUE OF ALCOHOL AS A DISINFECTANT.

Gomer (*Centrabl. F. Gyn.*, May 7, '98). The author, owing to the difference of opinion with reference to the disinfecting power of alcohol, has restudied the question in a series of experiments conducted at the Women's Hospital at Bâle. He infected threads of silk with different microbes and then exposed them to the action of alcohol. The length of time required to kill the micro-organisms differed according to the species. For pyocyaneus ten minutes' immersion sufficed. Thirty minutes were necessary for the staphylococcus aureus. The streptococcus was not affected by prolonged immersion.

In another series of experiments the author tested the comparative value of alcohol and sublimate for hand disinfection. When infected with the pyocyaneus, the hands required five-minutes' immersion in alcohol for disinfection. For the staphylococcus aureus five-minutes' scrubbing in alcohol, as a rule, sufficed. Scrubbing a single finger for five minutes with a 1-per-cent. solution of sublimate gave sterile results.

Gomer concludes that alcohol is a much less active disinfectant than sublimate. It fails wholly with the streptococcus and is totally unreliable for killing spores. To be of any direct value as a germicide it must be used in large quantities, the hands being completely submerged in it during the scrubbing. Merely wetting the skin with alcohol helps only by facilitating the action of the sublimate solution.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

703 Regular Meeting, Held in Apollo Hall, Oct. 18, 1898.

The meeting opened with the President, Joseph H. Hunt, in the Chair.

The minutes of the September meeting were read and adopted.

The Council reported favorably upon the following names:

John Daniel Doyle, Queen's College, 1898, Queen's Univ., Kingston, Canada.

Richard Alvin Henderson, L.I.C.H., 1897.

Rosalie Bell, Woman's Medical College, 1898.

Levi Allen Neiman, Balt. Medical College, 1897.

Leslie A. Turner, P. & S., 1898.

Jos. O'Loughlin Kilgarriff, Trinity College, Dublin, 1889.

Edward Parrish, L. I. C. H., 1898.

Eugene W. Candidus, Kentucky Med. School, 1892.

Thos. A. Mylod, P. & S., 1895.

The following applications were presented:

Edward Maurice de Castro, Jr., 412 Henry street, L. I. C. H., 1898. Proposed by Membership Committee.

Walter T. Slevin, 65 Eighth avenue, L. I. C. H., 1898. Proposed by Membership Committee.

Eugene A. Lynch, 834 Bedford avenue, L. I. C. H., 1896. Proposed by R. J. Morrison and J. M. Winfield.

Alexander Clements, 673 St. Mark's avenue, P. & S., 1892. Proposed by J. M. Winfield and J. M. Van Cott.

John B. Busteed, 269 Carleton avenue, P. & S., 1892. Proposed by D. Myerle and W. N. Belcher.

W. Ross Martin, 369 Quincy street, Omaha College, 1891. Proposed by J. M. Clayland and R. J. Morrison.

Joseph F. Long, 172 South Third street, L. I. C. H., 1895. Proposed by S. M. Riegleman and D. Myerle.

Harrison G. Allen, 296 Forty-seventh street, N. Y. Univ., 1897. Proposed by L. N. Foote and D. Myerle.

The following having been regularly proposed and favorably acted upon by the Council, were declared elected to membership:

Frederick W. Gilbart.
Walter S. Wellington.
Stephen L. Taylor.
Frederick J. Kneuper.

The following was the scientific program:

Dr. C. U. Gravatt of the United States Navy, Fleet Surgeon of the North Atlantic Station, related interesting details of his work in the late war.

Dr. Berryhill of the Flagship "New York," also spoke on the same subject.

A paper on "Some New Suggestions in X-Ray Photography, with Exhibition of Photographs" was read by Jarvis S. Wight, Jr., and was discussed by Drs. Sherwell, Myerle, Maddren, Thompson, Hunt, and others.

Owing to the lateness of the hour a paper on "Static Electricity" by Frederick J. Shoop, was read by title only; and a paper on "Some Electrical Appliances" by Lucy Hall Brown, was also read by title.

A motion was made by Dr. McNaughton and seconded by Dr. Maddren, that the Society congratulate Dr. Gravatt and his corps on their successes, with thanks for the splendid entertainment provided. And also that we honor ourselves by making Dr. Gravatt an honorary member. Carried unanimously by a rising vote.

A communication from the Women's Auxiliary Committee of the Medical Society of the County of Kings was read, announcing January 23 to 28th inclusive for the Greco-Roman Festival, and asking the members to give encouragement through representation from their families.

The Building Committee reported progress, stating that the new building would be in the course of erection in a few days.

Discussion on the question of having corner-stone ceremonies led to a motion that the matter be referred to the Building Committee for their decision. Seconded and carried. The Secretary was instructed to notify all the members of the Building Committee of such action.

The President reported the death of J. R. Vanderveer, once an active member of this Society.

Dr. Browning called attention to the fact that one of the old Treasurer's books had been in the possession of Dr. Vanderveer, and had never been returned to the Society.

He made a motion that the President endeavor to secure the

volume that it may be placed in the archives of the Society. Seconded and carried.

There being no further business, on motion the meeting adjourned.

DAVID MYERLE,
Secretary.

THE ASSOCIATED PHYSICIANS OF LONG ISLAND.

The second regular meeting of this Association was held at Roe's Hotel, Patchogue, on the afternoon of October 8th, Dr. William Browning in the Chair. About fifty members were present. After the reading of the minutes by Dr. R. J. Morrison and the reports of the various committees, the scientific work of the meeting was begun, which was as follows:

1. "Laryngeal Diphtheria," by Pedro F. Francke, M.D., of Far Rockaway.

Discussion opened by W. F. Dudley, M.D.

2. "The Use of Digitalis in Chronic Organic Cardiac Disease," by William B. Gibson, M.D., of Huntington.

Discussion opened by W. H. Ross, M.D.

3. "The Treatment of Fractures of the Spinal Column," by Algernon T. Bristow, M.D., of Brooklyn.

Discussion opened by L. S. Pilcher, M.D.

Unfortunately Dr. Francke was unavoidably detained, but Dr. Gibson gave the members the benefit of his paper, which was a careful and thoughtful digest of the subject, more particularly under three heads, *viz.:* First, "Which is the best preparation to be used?" Second, cases in which digitalis is most useful. Third, the proper doses to get the best results. An animated discussion followed, Drs. Ross, Bartley, Sheppard, and others participating.

Dr. Bristow's paper on "Fractures of the Spinal Column" was a masterly presentation of these unfortunate cases, and was discussed in all its phases by Drs. Pilcher, Trask, Delatour, Barber, and others; the consensus of opinion being that there was little hope of a complete recovery from a broken back. After the completion of the scientific part of the program, the meeting adjourned to the spacious dining-room of the hotel, where the members partook of a generous repast, which was enlivened by oratory and anecdotes until train time, when the doctors returned to their several homes, feeling that the time had been

profitably and pleasantly spent. On the way to Brooklyn the "hospital car," designed by Dr. Valentine, was exhibited to the members, much to their satisfaction.

OFFICERS.

President, William Browning of Brooklyn.
First Vice-President, Louis N. Lanehart of Hempstead.
Second Vice-President, William A. Hulse of Bay Shore.
Third Vice-President, Charles Jewett of Brooklyn.
Secretary, Robert J. Morrison of Brooklyn.
Treasurer, Arthur H. Terry of Patchogue.
Historian, Joseph H. Hunt of Brooklyn.

EXECUTIVE AND SCIENTIFIC COMMITTEE.

H. A. Fairbairn of Brooklyn, chairman.
J. D. Trask of Astoria.
W. H. Ross of Brentwood.

LEGAL COMMITTEE.

W. B. Gibson of Huntington, chairman.
J. F. Burns of Long Island City.
J. McF. Winfield of Brooklyn.

MEMBERSHIP COMMITTEE.

C. F. Barber of Brooklyn, chairman.
D. A. Harrison of Whitestone.
J. R. Taylor of Sag Harbor.

PUBLICATION COMMITTEE.

S. Hendrickson of Jamaica, chairman.
G. R. Butler of Brooklyn.
G. W. Fuller of Oyster Bay.

ENTERTAINMENT COMMITTEE FOR THE OCTOBER MEETING.

A. H. Terry of Patchogue, chairman.
W. S. Bennett of Patchogue.
W. S. Hewlett of Babylon.
L. S. Edwards of Patchogue.

The following gentlemen have consented to serve on the Local Entertainment Committee for the Brooklyn meeting: D. F. Lucas, chairman; E. H. Bartley, W. F. Campbell. The meeting is scheduled for the afternoon of Saturday, January 21, 1899. The full details of the day will be announced in due time.

R. J. Morrison, Secretary.

BROOKLYN SOCIETY FOR NEUROLOGY.

Regular Meeting, Held September 29, 1898.

The President, A. C. Brush, M.D., in the Chair.

Dr. Barber read the history of a case of insanity following fracture of the base of the skull; operation with recovery. A motorman was violently thrown over the dashboard of his car, striking upon the back of his head and neck. There was bleeding from the ear, mouth, and nose, and the characteristic symptoms of concussion of the brain lasting twelve hours, when from incoherent muttering he became boisterous and violent, necessitating restraint in bed; did not know his name or realize where he was; no paralysis; on examination, six weeks after accident, a marked depression, the size of a silver 25-cent piece was plainly made out on the left side of the occipital protuberance. A circular incision from above downward and from one parietal bone to the other and reaching well below the occipital protuberance, revealed a fracture running around the base of the skull from one temporal bone to the same part of the other, through the occipital bone, involving both tables and the depression above mentioned.

The depressed bone was elevated and removed, dura mater uninjured, but with appearance of extravasated blood beneath it, and the wound closed and dressed in the usual way. The day following the operation he was feeling well, ate and slept, with confusion of ideas and some aphasia; following this he became noisy, profane, and violent; wound became contaminated. After about a week he began to improve, and from being a troublesome patient became a helper; realized his condition and surroundings, and but for a mild restlessness and constant desire to be doing something was a very orderly patient.

To-day his general health is excellent, but he is very cross and irritable, has mental confusion and other symptoms similar to commencing dementia.

He said: "I do not think there has ever been a definite cause assigned for the mental condition following accident, save shock, disturbance of cells, compression or concussion. Miles and Duret have experimented upon animals, but not with entire success. Inflicted injuries are certainly different from accidental injuries.

"Von Bergman has endeavored to make a difference between

concussion and compression etiologically, but all his theory has failed to explain just what does take place.

"Disturbance of the circulation has been advanced as a great factor in mental disturbance, also, fracture of the brain substance. The latter is undoubtedly sufficient cause but in autopsy work it is one of the rarest finds to observe a rupture of the brain where the patient has survived the accident for any time.

"I believe that concussion must explain the mental disturbance in some way and probably by a disturbance of the cell functions, as the circulatory disturbance is not sufficiently permanent, for it is sufficiently well demonstrated that disturbance in circulation, if no rupture has taken place, is soon reestablished."

Dr. Brush described Miles' and Duret's experiments with dogs by inflicting injuries, falling from heights, and with revolving tables, and their unsatisfactory results. As to the advisability of incising the dura mater or not he thought best not, instancing the cases reported by Walton in the September number of the *Amer. Jour. Med. Sciences.*

Dr. Browning spoke of the lack of knowledge regarding post-traumatic insanity, especially of its pathology, instancing the haziness of the pathologies of the other insanities, except general paresis, and as to opening the dura mater or not each case was to be judged by its own condition and not according to any theory founded on one-sided fact.

The President then read an abstract of the celebrated medico-legal "Scott case" showing and demonstrating that all the features of the case were only explainable on the basis that the man suffered a fracture of the base of the skull followed by a hemiplegia, some hysteria, pleurisy with effusion, and that he is now hopelessly insane.

W. H. Haynes,
Secretary.

MAYOR VINCENT GOMEZ, M.D.

General Wood has appointed Dr. Vincent Gomez of Brooklyn, mayor of the city of Gibara. Dr. Gomez is a graduate of the Long Island College Hospital and was formerly instructor in otology at the New York Polyclinic, assistant-surgeon at the New York Eye and Ear Infirmary, and a captain and assistant-surgeon in the 112th Regiment, National Guard, New York.

THE BROOKLYN GYNECOLOGICAL SOCIETY.

Stated Meeting, May 6, 1898.

Vice-President, Dr. Wm. H. Skene, in the Chair.

PRESENTATION OF SPECIMENS.

MUMMIFIED EMBRYO (FROM CUBA).

Dr. A. J. C. Skene: Mr. President, I have a specimen obtained in Cuba, and this, in part is the letter which accompanied it:

"DEAR SIR:

"The bearer will hand you package containing a relic of the Cuban War. A resident of Santiago de Cuba sold to me several relics of the "Maine," found floating in the harbor at Havana the morning after the wreck, and gave to me an embryo child taken from the body of a young girl, the victim of Spanish soldiers. . .

"Yours respectfully,

"_____ _____."

This comes to me from a layman, and the specimen has interested me more than the description. It is a remarkable specimen of a mummy, and I only wish I knew how it was prepared. That is the only point of interest—the way in which it is preserved.

The President announced that Dr. Byrne would offer some general remarks on the use and abuse of pessaries in cases of retroversion.

Dr. Byrne: Mr. President and Gentlemen. Though this subject is one that may be considered threadbare, it having been discussed so often, yet in spite of that, and of the fact that at an early day after the organization of this Society I took occasion to make some general remarks on the same subject, it is to be deplored that the teaching of the best authorities of the present day, including that of our distinguished friend present, Dr. Skene, and the plain statements and directions laid down for the management of these cases, are every day ignored.

Indeed, I think I have removed a larger number of improperly shaped and ruinous so-called retroversion pessaries during the past three months than I have done in as many years previously. There would seem to be a very general misconception, not only as to the correct form, but also regarding the manner in which a proper pessary affords relief in these cases. Many general practitioners appear to think that it directly supports the uterus; in other words, that the uterine body actually rests on the bar which

goes toward the cul-de-sac. Now, we all know that it does not, but simply, by elevating the cul-de-sac of Douglas, and rendering the retro-uterine parts more or less tense, the cervix is thereby drawn back, and the uterine body proportionately swung forward and upward. In this manner only does a properly shaped pessary afford relief, provided the uterus be freely movable, and no adhesions or other complications exist. If, however, the uterus is found to be but slightly bound down by adhesions, these should first be carefully stretched or gradually broken up by daily packing the posterior cul-de-sac with numerous small but compact tampons soaked with carbolized glycerin. Even a week of such treatment will often render a case safely manageable by a pessary; whereas, without these preparatory measures, a resort to any mechanical device would be likely to do more harm than good.

It is not my intention, however, on the present occasion, to say anything touching diagnosis, or the principles, much less the details of the treatment of retrodisplacement of the uterus. My prime object is to call the attention of this Society, and through it that of the profession in general, to the frequent employment of a viciously shaped so-called retroversion pessary, by which serious and often irretrievable injury is inflicted.

The average general practitioner, without due reflection as to the mechanism of retroversion and the pelvic structures involved, encounters what he deems to be a case of retroversion, or it may be retroflexion, and yet it sometimes happens that it is neither one nor the other. However, he forthwith applies to an instrument dealer, and the latter individual, assuming the *rôle* of adviser, recommends and furnishes what he, from a commercial standpoint, conceives to be the right thing. As a result, the chances are about even that the very article against the use of which most gynecologists, as well as myself, have been protesting for years, will be selected. I have brought with me some specimens of these dangerous contrivances which I, and no doubt others here present, have been frequently called upon to remove. It is hardly necessary for me to say that if the case should happen to be one of simple retroversion, and, if the kind of pessary to which I refer be worn for any length of time, a flexion will be the consequence; while, if the latter deformity existed at first, the case will be made worse thereby, if not rendered incurable.

In contrast with these pernicious devices, I here submit some specimens of what we all know to be properly shaped instru-

ments, and the use of which, in suitable cases, and when properly adjusted, rarely fails to afford immediate relief.

And yet, however perfect in form and general outline a pessary may be, the general practitioner should bear in mind that, in size particularly, it must be suited to each particular case, and its adjustment effected with due regard to the parts with which it is brought in contact, and with as much care as would be observed in

A Dangerous Pessary.

fitting a boot to a tender foot; otherwise it can do no good, but, on the contrary, may be productive of much harm and discomfort to the patient. In this connection I would repeat and emphasize what has been said before: that the manner in which a proper pessary relieves a retroverted uterus is by tightening up the cul-de-sac, and thus drawing back and slightly upward the cervix, while the fundus is proportionately swung forward. So, we do not, nor can we by any safe mechanism, completely restore a retroverted uterus. We simply take away the pressure of the fundus from the

Correct Form of Pessary.

rectum, improve the circulation, and thereby, and in various other ways, relieve the patient.

For a more complete and permanent cure, apart from operative measures, as shortening the round ligaments, and ventral fixation, etc., all of doubtful permanent utility, in my opinion, we have to look to pregnancy and parturition as an important means to that end. If, during the period of involution following confinement, and for some time longer, recourse is had to a suitable

pessary, a large proportion of these cases may be cured, though in some the occasional return to its use for periods of a week or two will be found necessary and beneficial.

Before closing, and in connection with the act of applying a pessary for retroversion, I must not omit referring to a stereotyped phrase quite often employed in directions for the management of this particular form of displacement, namely, "first replace, or restore the uterus, and then apply the pessary." I am at a loss to understand what is meant to be conveyed by this instruction; because, if, on careful examination, the uterus is found to be freely movable, *i.e.*, the malposition uncomplicated by inflammatory products or adhesions, and, therefore, and not otherwise, in a proper condition for mechanical treatment, the very act of adjusting a suitable pessary restores that uterus as much as any proceeding can. If, for example, a sound in careful hands be passed with its curve reversed, a little beyond the os internum, and pressure is then made on the posterior aspect of the cervical canal, while the sound is gradually rotated in a normal direction, the uterus will now be in nearly a normal position, so long as the sound remains. On its withdrawal, however, the organ will immediately flop back, nor will the application of any mechanical device serve to maintain it in the nearly normal position to which it was brought by the aid of the sound. Hence, this talk of restoring the uterus first, and then applying the pessary, is sheer nonsense.

But, Mr. President, I feel that, in these discursive remarks, I have far exceeded my intention at the outset. I am not without hope, however, that through some interchange of views here tonight, and the publication of our transactions, the general practitioner may be brought to realize the evil consequences likely to follow the use of improper pessaries in cases of retrodisplacement of the uterus.

DISCUSSION.

Dr. A. J. C. Skene: Mr. President, I must say that I consider myself very fortunate in having an opportunity to hear Dr. Byrne discuss this subject, because he is one who has had abundant experience and has been so constituted that he has been able to take advantage of pessaries both for the benefit of his own cases and for our benefit. I have read much about the use of mechanical supports of the uterus for retroversion and I have heard very much said, but I can say honestly (without any disposition to flatter Dr. Byrne) that there is more practical information in the

short statement that he has made than in the volumes that I have read on the subject. He has accurately struck the keynote of the subject, and has wisely stated that much can be accomplished and that perhaps there is no means at the command of the surgeon which does more valuable work than a pessary, still, with that advantage come the disadvantages of much abuse and great suffering, and as he truly said, many cases that are entirely relievable, many of them curable, are rendered incurable by the improper use of those mechanical supports.

I am sure Dr. Byrne will remember a number of years ago, perhaps nearly twenty, while this subject was under discussion in Boston, Dr. Peaslee had stated his views regarding the use of pessaries, advocating, and giving good reasons for so doing, the use of his own pessary, the one that bears his name and is in use at the present day. Following him was Dr. Atlee of Philadelphia, who took the very opposite ground from Dr. Peaslee, and said that for many years he had been employed much of his time in removing pessaries, but he had never introduced them. Now Dr. Byrne has struck the happy medium between these two gentlemen. There are two sides, or two armies I may say, in the profession—those who believe in the use of pessaries and use them to the advantage of suffering woman, and those who condemn them because they used them badly. I think these two classes are illustrated by Dr. Peaslee and Dr. Atlee. Dr. Byrne has taken the happy medium, where we generally find the truth, and that is that they are most valuable and yet the most abused of all the means we have at our command for the relief of uterine dislocations, and hence cause a great deal of suffering.

I was more than pleased with Dr. Byrne's suggestion as to a way in which we might possibly save suffering humanity from the abuse of pessaries, that is, to prevent the sale of them. It seems as if that was about all that was left for us to do; certainly enough has been said and written that is based upon Dr. Byrne's views in regard to the proper way of using pessaries. He has called attention to the reason why they are so often misused, and that leads me to suggest a means of relief, which would not be so direct or important as Dr. Byrne's, and yet, if we could only carry it out it would be of ultimate value, perhaps the greatest value, and that is, to educate surgeons better. As an educator in medicine I am conscious, and have been for a long time, that there is a great lack of system or ability in the training of surgeons. The use of pessaries is certainly an important branch

of surgery, and the reason why they are so improperly used is that surgeons, many of them at any rate, are not at all skilled in mechanics. I believe that every man who intends to be a surgeon should be educated in the rules of mechanics, and one reason why Dr. Byrne has been successful is that he is skilled in the science and art of mechanics; a first-class mechanic. I know that if I have happened to avoid some of the abuses of pessaries it has been because I was drilled in mechanics during my student days, and hence I believe that every surgeon should be trained in the mechanical arts. I see reason why a surgeon, or one who intends to be a surgeon, should take up mechanics as part of his preliminary education—I mean that branch which is taught in the biological department in many colleges now. A student intending to be an engineer, who takes the elective course including biology, is required to spend six months in a workshop at practical instruction. I remember the son of our friend Dr. Reeve, who was attending Yale, took that course and he had to go into the workshop, an engine-building establishment, and there practically work and study under good training for six months. He could elect or choose the shop that he was to work in, so he chose Ohio, where they have first-class engine-shops, and he graduated with honor and now is a professor in the Worcester College in Massachusetts. His success since he graduated has been remarkable, because he qualified himself for his lifework as an engineer. Now, if we could get hold of the ambitious student who is bound to be a surgeon whether or no, and teach him mechanical art, or let him practise on the manikin until he got some rational ideas of mechanics, then I am sure he would make better use of his time than to use pessaries in a bungling way in treating displacements of the uterus. And I would like to add to Dr. Byrne's suggestion this: a better education, so there shall be no man who is utterly incapable of employing a pessary, or one who is incapable in the first place of understanding the mechanism of dislocations and equally as ignorant of how to overcome them on purely mechanical principles.

I was rather surprised that Dr. Byrne did not show a specimen of the pessary which I believe to be the most pernicious instrument that is offered for sale in the shops at the present time—I mean the retroversion pessary that is bent up posteriorly further than anything shown by Dr. Byrne, and to make matters as much worse as possible, it has a great big, thick bar that fills the cul-de-sac entirely and does the very thing that one should avoid.

The only way that patients can wear the instrument at all is that being pointed the uterus insists on pushing it downward until it protrudes from the vulva and in that way removes the upward pressure posteriorly. I think the pessary has become less fashionable since the day of the bicycle, for that is one instrument which they cannot wear and ride the bicycle at the same time. Now, one would naturally suppose that this instrument that had done so much harm—and it has done more harm in my estimation than any instrument ever invented—would be condemned, but the fact is, that the immense reputation of the inventor of it made it popular, and it remains so, although the original has been badly modified. I am reminded more forcibly of this by a little incident that occurred to me a short time ago. A lady who left this country about a year ago and traveled extensively in Europe had, when she left, a slight retroversion which was aggravated by her sea voyage. She was one of those who was compelled, *nolens volens*, to make daily contributions to the Atlantic as she crossed over. This aggravated her dislocation, and she went to Paris and saw there a distinguished practitioner, not a Frenchman perhaps, but one who pleased her very much by telling her that she had a retroversion and he would use an American pessary, which proved to be a bad imitation of the pessary I am condemning. She wore it to her disadvantage until she came home. I saw her and removed it, and found she was in the condition Dr. Byrne has mentioned. She had worn it so long that she had converted her retroversion into a retroflexion, and I have my doubts about the possibility of curing her by any means short of some of the surgical procedures that are recommended for her relief.

The fact of the matter is this: that the treatment of a retroverted uterus with a malfitting pessary, such as Dr. Byrne has described, has the same effect upon the uterus that one's throwing a gentleman's coat across the back of a chair has on the coat itself—it simply doubles it up. Continual pressure at the junction of the body and cervix of course soon converts a retroversion into a retroflexion, and that had occurred in the case referred to.

In order to be perfectly fair to the use of pessaries, I might refer to the fact that I am still old fashioned enough to believe that the vast majority of uncomplicated cases of retroversion are curable, notwithstanding what Dr. Byrne has said, and I presume the difference between my optimistic and his somewhat pessimistic way of looking at the subject comes from this: that if a

case of retroversion has existed for some time, the anatomical changes are such that complete cure is not possible short of utero-gestation, as Dr. Byrne has wisely said, but if one has the good fortune to get a case which has not existed so very long, not long enough for complete atrophic changes to have taken place in the round ligaments—and those changes do take place—then I believe that many of them can be cured; but it requires time and patience on the part of the patient, and skill on the part of the surgeon. I would like to call attention to another point in this connection and that is this: there is usually in connection with the retroversion considerable subinvolution both of the uterus and the uterine ligaments and the vagina, and to be of any service the pessary employed must be a large-sized one to fit well. Then as the case improves a smaller-sized instrument is necessary, and one should reduce the size of the instrument, and then when the uterus appears to stay in place with very little aid from this support, remove it and see if there is that disposition for the uterus to fall back again, and if so, put her under the treatment again and continue it for a few months. Many cases treated in this way get perfectly well and remain so. That is a very important point. Now let me add to these results that can be obtained by the proper use of the pessary what I have seen so many times that it has been very forcibly impressed on my mind, and that is the very opposite practice of that which I have just now recommended. The retroversion is treated in an improper way; the pessary does not accomplish quite as much as is desired; that is to say, the patient is not relieved at once (and I hold that a proper fitting pessary if it is going to serve any useful purpose should be such that the patient is unconscious of its presence), a larger one is used that stretches the vagina and the suffering is great and greater the larger the pessary that is employed, until I have many times removed such a pessary and found complete atrophy of the muscular tissue of the posterior vaginal wall so that there really was rectal hernia where the cul-de-sac should be, and those cases are incurable. I have never seen a case where the vagina was restored to its integrity when this complete atrophic change had taken place.

There is much that might be said about how one should adapt a pessary, but I do not believe that all that any one can do in the way of writing, or talking, or explaining will ever give one the facility in the use of pessaries. I do not believe that any description, no matter how accurate, either in writing or verbally, could

ever teach a man to make a chair like this one I have been sitting on [indicating], and yet there is no more mechanical skill required in the making of a chair than should be employed in the adaptation of pessaries, and never was there anything more truly said than that every case should be treated by itself, just as every one would have his clothes or his shoes made to fit him, and therein is where the great blunder comes, I believe. I think it is a mistake—not a very great one, but still it is a mistake—for a man who can afford to have shoes made to fit him, to buy and use ready-made shoes. There is no harm in ready-made clothing; they do not do much harm, for they look well enough and keep him warm, but ready-made shoes are guilty of doing much damage, as you know. The surgeon adopts the same method in the selection of pessaries. One has read that Jones' pessary is just the thing for retroversion, and so he sends to the instrument-maker for Jones' pessary and the patient has to accept it, whether it fits or not; and therein is where much mischief is done. I believe a patient should be measured as accurately for a pessary as she should be for her best gown.

I was glad Dr. Byrne called attention to the material out of which hard rubber pessaries are made. For a long time I have been in the habit of molding or modelling a pessary for each patient from the soft rubber, and letting her wear it until I saw it answered the purpose, and then having a good hard-rubber pessary made according to the model, and that is not always an easy thing to do. You often have to warm them and modify them after you have received them from the instrument-maker, but if care is taken to adapt a pessary to each case and to make it do what it should do and what it only can do without damage, then all will be well. If Dr. Byrne will begin with the instrument-makers and suppress them, I shall endeavor as far as possible to turn out men with sufficient mechanical knowledge of the treatment of uterine displacements, even if they are a little defective in some of the higher branches of surgery, so that they will be able to use pessaries and not abuse them; but, as I said before, that can be done only by actual clinical observation and practice.

Dr. Charles Jewett: We sometimes hear the nihilistic remark, Mr. President, that the world would be better off if there were no drugs. This is true as much of all remedial measures as it is of drugs, not because they are not valuable, but because they are so often misused. We cannot stop the sale of pessaries because of

the evil which has been done with them. The most we can do, I fear, is to educate the profession how to use them; or, at least, if we cannot do that we ought to be able to teach the practitioner not to use them at all if he does not know how to use them properly.

With reference to the value of pessaries in general, they undoubtedly have a useful application in certain cases, temporarily in some, and perhaps for a longer time in others, and not only as a palliative but even as a remedial measure, as Dr. Byrne and Dr. Skene have pointed out. Their utility, however, is limited. There are cases in which the pelvic floor will not support the pessary; cases again in which the retro-uterine structures are too sensitive to permit its use, and others again in which, owing to adhesions of the broad ligaments or appendages, the uterus cannot be held in normal position by a pessary, even though it be replaceable. In many instances the retro-displacement is by no means the essential lesion.

One point the Doctor raised—the liability of the pessary to change its shape under the action of hot douches was new to me. I had not supposed that a pessary of hard rubber, vulcanized, was liable to be softened under a temperature of 120° F.

A point which interests me is the use of a pessary for the cure of old retroversion, with the aid of pregnancy. There are two periods at which the pessary is useful in such cases: during the first three months of gestation, and during the post-partum month. If the uterus is kept up during the second and third months abortion, which is otherwise practically inevitable, may be prevented, and pregnancy may go on to term. If it can be kept in position after labor till involution is complete the old retroversion may be permanently cured, but not always.

Another and more important matter, perhaps, in the employment of this line of treatment, relates to the management of the post-partum period, with a view to preventing a retro-displacement that had not existed before. So far as my observation goes only a small proportion of practitioners follow up their cases during any large part of the puerperal period. This lasts six weeks and sometimes more, and the patient after labor should not be dismissed from the doctor's care under a month at least. No obstetrician can do justice to his case who does not watch the course of things very carefully during that entire period. There are three indications which can be relied on, two of them in the nature of symptoms, as giving warning of malposition or retrover-

sion of the uterus, occurring at the post-partum period. One is pain in the back, and the other is hemorrhage—a little bleeding after the time when bleeding should have ceased. The occurrence of bleeding in the third or fourth week should lead to the suspicion that the uterus is misplaced. It may be due to other causes, but you may find a retroversion. Pain in the back is another indication. If a patient gets up and is entirely free from pain in the back, has no bleeding, and feels comfortable, it is almost safe to assume the uterus is in proper position. But a third and crucial test is the physical examination. The obstetrician does not do his duty to his case unless he examines the pelvic organs in the third or fourth week after labor once or more and if there is any suspicion that the uterus is inclined to retroversion the examination should be again repeated. If the uterus is retrodisplaced, place it in proper position, apply a pessary and change it from time to time as Dr. Skene has suggested, as involution goes on. After two or three months the pessary can be removed and a permanent malposition will have been prevented.

Dr. W. B. Chase: Mr. President and Gentlemen, I was unfortunate in getting in only to hear the closing part of Dr. Byrne's discussion and so I will not be able, in the few remarks I have to make, to follow closely what he has said, and yet I am convinced that our views on the question of these pessaries will not differ very materially.

As regards my individual experience, I can say that it has changed considerably in the last fifteen years and that I find occasion to use pessaries much less frequently than formerly; and I am not sure but my patients have done as well or better without them. To my mind there is more than a single reason why a pessary should be used in a given case. The fact of a moderate displacement of the uterus is not of itself a reason for the employment, in my opinion, of mechanical support. One woman with a uterus moderately anteverted or retroverted suffers no inconvenience whatsoever, and I think in those cases we are justified in letting the woman alone. It is only, as a rule, when displacements produce symptoms of discomfort that they require mechanical support; then the question whether mechanical support shall be applied or not will depend on several circumstances—the size of the organ, the amount of tenderness, and the shape of the pelvic cavity. I doubt not that it is the experience of every one here that in a certain proportion of cases of simple retroversion without adhesions the vagina is so short posteriorly and the curve of

the sacrum so small that mechanical support is utterly useless. To my mind, in a case of retroverted uterus which is not particularly large in size and sensitive, the discomfort comes from dragging of the ligaments, and it can be easily reduced. I know of no condition in which the proper use of mechanical support serves a more satisfactory purpose, and after the uterus has been held in proper position for a space of time the chances are very much in favor that it will remain so.

Such large and ill-fitting instruments as pointed out by Dr. Byrne certainly must meet with universal condemnation, and no one should attempt to insert a pessary who has not some mechanical skill so he will be quite certain it is not likely to produce irritating and injurious results, and if it does, have it removed very quickly.

The remarks of Dr. Jewett I think are exceedingly pertinent with regard to the recurrence of displacements after parturition. I do not know what the experience of others has been, but I have noted that not infrequently in a uterus which was retroverted or retroflexed prior to conception and pregnancy having taken place, that unless particular care is exercised during the period immediately succeeding labor—the post-partum period—the very same condition is likely to obtain again. Just why I do not know; there seems to be a habit established in the system that the same displacement would repeat itself.

I believe that this is a conservative body of men and that the opinions expressed by the gentlemen who have preceded me would have weight with the medical profession in deterring them from the indiscriminate use of pessaries. It seems to me patent to every observer of displacements that the pessary which gives pain is a pessary which should not be used, and unless discretion can be exercised in this particular, they had better not be used at all.

Dr. Geo. McNaughton: Mr. President, when I received notice of this meeting and the paper by Dr. Byrne I regarded it as a great treat in store and expected to be present at the reading of the paper, but unfortunately another meeting upstairs held so long that I missed all but the latter part of it.

I have a very distinct recollection of one of the members of this Society presenting a pessary and there was quite an animated discussion as to how the thing went in; so, as I understand it, some of us at least do not know how to use all the pessaries that are in the market.

There is one result of the use of pessaries that I have noticed.

Dr. Byrne may have spoken about it, but as I did not hear it will mention it and if he has it will be an endorsement of his observation. That is in a patient who has worn a pessary a long time the posterior vaginal wall is pushed up, I might say indented, the uterus being a movable organ. Constant irritation produces a certain amount of inflammation, and in consequence adhesions are produced which connect the rectal with the uterine peritoneum, producing and making permanent the condition which we seek to cure. I have several times seen them in abdominal sections, and separated them, and in each one of these cases the patients had worn the pessaries a long time. Such adhesions would pull the body of the uterus directly backward.

A pessary should occasionally be removed and the patient should be allowed to get along for a time without it, and then it should be replaced. Every year I use pessaries less and less, and am more inclined to the soft rubber variety, because they do less harm.

Dr. W. J. Corcoran: I cannot understand exactly, Mr. President, the point Dr. McNaughton made. We can get all sorts of accidents from pessaries improperly used, and a pessary that would cause adhesions between the fundus of the uterus and the peritoneum of the cul-de-sac never performed its intended function in the first place. That was a pessary used with the idea which is still published in a good many text-books, to put a scaffold under the body of the uterus, and that I do not think you can do without causing damage. If the pessary is used properly, as Dr. Byrne stated, it throws the cervix backward and thereby the fundus forward, and there can be no adhesion there. If you have a retroflexed uterus that is a different thing.

The great trouble in the use of the pessary is not in the pessary so much as in the hand that introduces it. If anybody had seen the author of the paper, as I have, sitting down with his own pessaries, made to suit his own ideas, and with his spirit-lamp molding and modelling and fitting one after another until he got one to fit, I think the subject of pessaries would be better understood than it is now. The ordinary practitioner knows that the Albert Smith pessary is the best for an ordinary retroversion, and he goes to an instrument-maker and asks for an Albert Smith pessary. He does not get an Albert Smith pessary, but one of the instruments Dr. Byrne has shown to-night, and the patient is made worse by its use. I think it all comes down to the plain statement of the point that everybody seems fighting shy

of, but which I am going to sacrifice myself on the altar and make, and it is this: that a pessary should not be used by any one except a man who is more or less of a specialist in gynecology. It takes a trained finger and an intimate knowledge of the pelvic organs and their mutual relations to apply a pessary properly.

I was also glad to hear the Doctor speak of the influence of hot water on the pessary, because that is a subject on which he and I have had many arguments, and he never gave in until very lately. He always claimed a pessary could not be changed by the action of hot water. His old pessaries were made of good material and could not be so changed, but the ones sold today represent the efforts at economy on the part of dealers, and can be changed very readily with a very little temperature, as we have recently demonstrated in the basin, and has been demonstrated in the vagina by the instruments which have been removed. I did have in the Dean Street Dispensary a large collection, what I called a curiosity box of pessaries which were removed there.

The able men of our profession seem to be running all toward surgical work, ventral fixation, the Alexander operation, etc., and at the same time they cannot agree which is the best operation. One will say one operation is best, another will claim the other operation is more desirable, and somebody else will say they are both bad, and vaginal fixation is preferable. If we take the question in this way, that where a woman has an ordinary retroversion of the uterus due to relaxation of the ligaments, a condition of subinvolution occurring, probably, as in the majority of cases, after childbirth in a feeble and relaxed condition, and introduce a proper fitting pessary and send her about her business, and then give her the facts as to ventral fixation, Alexander's operation, or vaginal fixation, and ask her to decide—I think she will decide on the pessary nine times out of ten. That does not comport with the ideas of our modern surgeons, but if you tell the patient the risk, although it is small, I think she will hang on to the pessary.

Another cause for many of the bad effects we see is the good pessaries do; the patient is made comfortable, happy and well, her backache is gone, the bearing-down is gone, the vaginal discharge is gone if she attends to herself properly, and she does not come back, and that pessary gradually wears off the mucous membrane and eats in deeper and deeper, and sometimes I have

had to take it out with a bone forceps. In that way we get an abuse of the pessary which is not our fault; but is the patient's fault because we did too much for her at first and she does not come back. It is almost impossible even with intelligent women to make them understand that it is a foreign body which does not belong there and which has to be looked after.

Two weeks ago I sent an order for two or three gross of pessaries with a sample to avoid getting improper ones. All I could get in New York city was fourteen.

Dr. McNaughton: Dr. Corcoran misunderstood me. I did not represent that result following the proper use of the pessary at all. It was certainly an exceedingly improper use of the pessary and an improper pessary, but that is one of the results noticed.

Dr. Byrne: I have little or nothing to add, Mr. Chairman, to what I have already said, and as to the remarks of Dr. Skene, I have only to say that I am pleased to find, as I would expect, that his views and my own are practically identical.

What Dr. Jewett has said regarding post-partum recurrence of retroversion, is also strictly in accordance with clinical observation and general experience. There is, however, one of the rational symptoms, almost invariably referred to by patients, and which he has inadverently omitted to mention, namely, a feeling of incomplete evacuation of the rectum. This symptom, though by no means confined to retroversion, is rarely absent, and the patient will usually refer to it by saying, "I feel, in the act of moving my bowels, as if there was something in the way, or something yet to come." When patients omit to make this statement voluntarily, I have rarely failed to elicit it by further interrogation. Cases of very slight retroversion, not interfering with the circulation, and exerting no mechanical pressure on the rectum or elsewhere, rarely need a pessary, and unless in exceptional cases, no one of judgment would be likely to use one.

I fully agree with Dr. Corcoran in his criticism of certain modern surgical procedures for the relief of retroversion, and I have often wondered if gentlemen who are resorting to these operations so frequently nowadays would counsel their own wife, mother, or sister to submit to such measures, or whether they would not try some simple mechanical device, rather than use the knife, with but little chance at the best of obtaining permanent relief. I think not. I think, moreover, that the future history of these so-called radically curative operations for retro-

version will not be very dissimilar to that of the ingenious plastic work daily resorted to by all, many years ago, for rectocele and cystocele. In the vast majority of these latter cases, the parts operated upon were found, ere twelve months had elapsed, in a much worse condition than if they had never been touched.

Contrary to the whims and notions of those who declare that they are more occupied in removing than in applying pessaries, I am firmly convinced that they are not only a useful and valuable, but an indispensable aid in the treatment of retrodisplacements. Like many other good things of this world, they have been much abused, or rather misused, and I think it will usually be found that would-be conservative reformers who object to their use, are incompetent to offer any opinion on the subject. Indeed, it is not at all unlikely that some opponents of mechanical aids in the treatment of uterine displacements, may base their opposition largely on a sad experience growing out of improperly made pessaries, something, for example, like the mischievous device which it has been my main object here to-night to condemn, and especially to warn the general practitioner against using or countenancing.

NARRATION OF CASES—CÆSARIAN SECTION.

Dr. Jewett: I would like to relate a case of Cæsarian section in which the operation was done on the absolute indication, the true conjugate measuring 2½ inches. The only peculiarity about the case to which I wish to call attention is the transverse incision of the uterus. This incision was made at the base of the fundus at the level of the origins of the round ligaments. This method was proposed by Fritsch. A few operations of the kind have been done abroad, but I do not know that any others have been done in this country. It is said to have several advantages, but the only one which is clear to me is the great and uniform depth of the wound, which can therefore be more securely closed, It has been my experience, in two instances at least, in making the usual median longitudinal incision to invade the lower uterine segment. That in many cases in which the labor has been severe has become very thin, and cannot, therefore, be sutured firmly. I have had no accident from that fact, but there is a feeling of unsafety in closing the very thin lower portion of the uterus, and more danger perhaps of hemorrhage from that part of the uterus during the operation, owing to imperfect retraction. I do not think, however, there is any advantage in

LUCIUS HYDE, M.D.,

President Medical Society of the County of Kings, 1847.

making the incision transversely. The same advantage is gained by making it longitudinally, provided it is confined to the fundus. Müller has operated in several cases with a longitudinal median incision in the fundus.

Dr. Chase, to whose courtesy I am indebted in the matter, may have something further to add. The woman, I should say, was a patient of Dr. Peter Scott. Here is a photograph showing the appearance of the abdomen after a laparotomy in which the skin incision had been made transverely at the upper border of the pubic hair. The object was to hide the scar. After the hair had regrown the abdomen would present no visible trace of having been opened. The elasticity of the skin easily permits the usual longitudinal incision of the remaining structures.

DISCUSSION.

Dr. W. B. Chase: Mr. President, I saw the case to which Dr. Jewett alludes, being called in consultation with the physician in attendance. She was a young French girl and at the time I saw her she was in labor. The physician had already made a diagnosis of the case, that there was serious contraction of the pelvis and I was able to confirm the very narrow anteroposterior diameter, and advised immediate operation. The family were quite willing, and she was sent down to the Bushwick Hospital and operated on a few hours later by Dr. Jewett, before labor had progressed far enough to put the bag of waters in jeopardy. I was called out of town that day and did not see the operation, but I have seen the patient once or twice since that time, and she is convalescing and doing well; the child is also doing well.

HISTORICAL DEPARTMENT.

SERMON ON THE GOOD PHYSICIAN—LUCIUS HYDE, M.D.

BY REV. FREDERICK A. FARLEY, D.D.

Church of Our Saviour, Brooklyn, September 21, 1862.

Lucius Hyde was born at Rensselaerville, Albany County, of this State, on the 13th day of December, 1800, and died in this city on Thursday afternoon, the 11th inst., at 5 o'clock, at the house of a brother, between whom and himself there had always been an unbroken affection and in whose family he had for many years made his home.

His father was a physician of very extensive practice in his own native country, and one of the most successful surgeons of his day in that quarter of the State, widely respected for his high moral character and business-like sagacity, and beloved for his large benevolence and public spirit. The mother of our friend I had the great happiness with many of you to know, one of the loveliest specimens of womanly and Christian character, after the beautiful pattern of the Friends, and for whom her son, and indeed all her children, cherished the most devoted offection.

The example as well as the training of such excellent parents were not lost on him. It was not difficult to trace in his character some of the finest traits of both; and from his earliest years he is remembered as an examplary child, an affectionate and favorite brother.

After the proper course of preparatory study he entered and passed through Union College, then and still under the Presidency of the venerable and accomplished Dr. Mott, and graduated with the full honors of that old and respectable institution.

He soon entered the office of his father, to whom a large class of students was always attracted, as a student in medicine; and having received at the close of his course the degree of M.D. from his Alma Mater came to this city in 1825 and was at once taken into partnership in his profession by the late Drs. Ball and Wendell, and after the death of the former remained for many years still connected with the latter. Dr. Hyde was thus actively engaged for about twenty-eight years in this city. About nine years ago he became incapacitated by disease and wholly relinquished practice. At the time of his decease he was the oldest physician in Brooklyn.

Few men who have followed his profession have had more of the great qualities which mark the good physician. He had in his professional walk the firmness of a true man, united to the gentleness of a true woman, and the strictness with which he pursued a given course of treatment was always tempered by the pleasantest manner. He was courageous and sufficiently self-reliant, because he felt himself in the path of duty; his self-reliance never went so far that he forgot his dependence on the Divine Blessing. Honest, most honest was he; and conscientious to the last degree in his professional intercourse with his patients, never deceiving with false or hollow hopes, or affecting in peculiar or difficult cases a sagacity which he did not feel.

With ample impulsiveness of natural temper he united great

sobriety of judgment, so that he was never rash or hasty in professional council or act, in the sick-room he was calm and self possessed, intent upon his work but cheerful and at ease in its performance. He was eminently kind and sympathetic, and the geniality of his nature flowed forth so full and free that the hearts of his patients were bound to him at once and forever.

In hours and seasons when human hope was waning and, as he well knew, for sufficient reason, he had no words or air of cant, but in a sincere and simple yet reverent faith and spirit he could turn the thoughts of the sufferer to the true source of consolation and strength.

Dr. Hyde was a man of marked disinterestedness and benevolence. I think he was about as little annoyed by a regard for his own interest in the ordinary sense of the phrase as any man I have ever known. He was neither moved by the ambition for fame nor the ambition for money. Indeed, in regard to the last point, he was hardly just to himself, since every man is entitled to his honest earnings; for while he was to be honored for his ever ready, faithful, and gratuitous service to the poor and unfortunate, he had a right to look for better things than the neglect of his just demands from the able and the prosperous, who, under God, may have owed to him their lives, or the lives of those who were dearest on earth. Here in justice to the noble profession. of which he was an ornament, let me say, in passing, that I have always found its members ready to serve the poor as well as the rich. I have never during thirty-four years in my own profession asked of any such services but with a prompt response.

Others have gone I dare say, as he did, in any hour of the night, in any state of the weather, at all seasons of the year to the houses of those who could make no return but thanks.

But I have seen him in the homes of the poor, just as gentle, just as kind, just as considerate for their feelings, just as true in his sympathy, giving as freely his time and strength and practical facility of manipulation, and careful nursing as in any case and under any circumstances and for any fee that could be imagined.

Dr. Hyde was a man of a large and generous temper. He had no meanness or littleness. He had the utmost regard for others' feelings; and instead of magnifying—I had almost said of seeing—I may say, of seeming to see their faults, he delighted to extol their good traits or good deeds, to qualify or extenuate

as far as possible their bad ones, to make amplest allowance for their mistakes or errors.

Though as I now know—but never before—he had in life his full share of personal injustice of which to complain, his good will to all never forsook him; his benevolent judgment as well as treatment of his fellow men was unfaltering, and the brighter and pleasanter aspects of life and society so far overbalanced with him the darker and repulsive ones that he had no sympathy with the croaking and fault-finding which, alas, is so common and so sad.

He was almost marvelously free from prejudice; he had no professional jealousies; he carried a broad catholic spirit into his profession.

I have heard him called the last of the old school of physicians among us for a reason which I sincerely hope is purely imaginary, namely, that the men of that class are now simply professional in their intercourse with their patients, rather than being besides their welcome friends. I cannot believe it. I certainly do not want to believe it. Exceptions there may be, and they must be most unfortunate, but surely of all men our physician, our family physician, so familiar in our homes, the depository of such delicate confidence, the holder of such fearful responsibilities, if he be not besides a welcome friend there is a most anomalous relation.

I rather think that now, as always, the only difference is in difference of temperament, a difference of self-discipline, or both.

Dr. Hyde happily made his patients his friends, for he was a friend to them. Their children, their varying fortunes, their special circumstances, their peculiar trials, great or small, their special sorrows or joys, always interested him.

I have mentioned his freedom from prejudice and have often thought in illustration of it of his treatment of myself in this respect. He well knew early after becoming acquainted with me, and at a time when prejudices upon the subject were far more excusable than now, that I had adopted the homœopathic practice, and had no other in my family.

He knew that at the time there was no homœopathic physician in my parish. The late lamented Dr. Stansbury had not then joined us. We talked freely of the subject, and from the first he was and remained entirely catholic and generous in his views, never by word or act did he swerve from the friendship with which he had honored me; though we differed upon what, from

his professional standpoint, were most vital questions, especially in regard to his own relation to medical science and to the community.

Dr. Hyde was never married, and never, therefore, the head of a family, but he had a home, nevertheless, where his memory will be enshrined so long as they shall continue to beat in many hearts from oldest to youngest—a home where through nine long years of slowly increasing infirmities, marked by great bodily sufferings, and the nine last months of sad and often painful and wearisome confinement. There was, God be thanked, the most unmurmuring and noble patience on his part, and the most cheerful and devoted care for his weal and comfort on theirs.

He who had been the faithful minister of healing and comfort to the sickness and suffering of others, was thus, in the mysterious providence of God himself to make trial of the agony of pain, at short intervals, for years—of the protracted but sure and disabling decay of his powers of body and mind, of the, to a sensitive mind like his, terrible apprehension of burdening and tasking the patience and affections of those around him while he was living all uselessly.

It was doubtless a great trial. So he thought it, and so he spoke of it; if it was he bore it nobly. But not uselessly was he living even then. The same trials which had made him the good physician rayed out through his long decline and in his wearisome confinement, and over all and through all there breathed a tone of childlike submission, faith and piety, which showed where he had placed his trust.

Should I be asked what evidence I have of his fitness to die, I should reply, first and chiefly, by the faithfulness, the fidelity of his life; by his "fruits" I know him—the Saviour's own test—and I knew him to be ready. But again, if that were needed, by his declared submissiveness to the Divine Will whether for life or for death.

It were strange if the hearts that have loved him should not mourn his departure, however blessed the change for him. It were strange, if with these soft and balmy airs, which in these early autumn days are breathing over his grave, there should not mingle some sighs, from those who visit it and cherish his remembrance, at the thought that he is gone hence forever; but stranger still, if, with the rich and precious consolations which come to those hearts from that holy and blessed Gospel which

inspired his trust, there should not be heard by them, by us, the call

"Like him be faithful!"

LUCIUS HYDE, A.M., M.D.

The pleasant thoughts expressed by those who were acquainted with the subject of this sketch, all tend in the one direction, to illustrate the noble character of the man and his qualifications as a physician.

His father, Isaac Hyde, M.D., a member of the Albany County Medical Society was a native of Canterbury, Connecticut, his grandfather, Isaac Hyde, Sr., also of Connecticut, his mother, Lydia Foster, of Massachusetts. Dr. L. Hyde was unmarried.

He was born in Rensselaerville, Albany County, New York, December 13, 1800, and died in Brooklyn, N. Y., September 11, 1862. He was prepared for college in the private schools of Rensselaerville, and entered Union College in 1818, receiving the degree of A.M. in 1822, entering his father's office as a student of medicine. He was licensed by the New York State Medical Society in 1825; in the same year began the practice of medicine in the City of Brooklyn.

During his active life in the practice of his profession in this city, he was attending physician to the Brooklyn City Hospital from 1845–50, and the Brooklyn Dispensary from 1846–51.

His connection with the Medical Society, County of Kings, dates from 1835, having held the position of Censor in 1843–46, and 1848, and President in 1847.

He was also the delegate to the American Medical Association 1847–49–50, and 1851, and delegate to the New York State Medical Society, 1850.

WILLIAM SCHROEDER, M.D.,
Secretary of Historical Committee.

A POCKET MEDICAL DICTIONARY. By George M. Gould, A.M., M.D. A new edition entirely rewritten and enlarged, including over 21,000 words. Philadelphia: P. Blakiston's Son & Co., 1898. Price $1.00.

This little book is characterized by its simple and practical system of pronunciation; seventy-five per cent. of words specially pronounced; concise definitions; many valuable tables; omission of obsolete words; type, shape, and size of book; 3500 copies were sold before publication. The sale of Dr. Gould's dictionaries has reached 85,000 copies. The Pocket Dictionary is a most admirable compendium, and well deserves the success which it is sure to achieve.

MISCELLANEOUS.

A CUBAN IDYL.

A Soldier lay ill in Siboney.
Siboney is a tiny Cuban port—
Santiago calls it a health-resort.
It is, as places in Cuba go,
For the sea rolls in and the breezes blow.
But Oh! the diseases indigenous there,
Where deadly miasmas fill the air;
Where typhus, diphtheria, poisons systemic,
Edema malignant are always endemic.
Where "Agues taint," the lines of Shakespeare run,
"When seated idly even in the sun."
Where Cholera grips in September's rains
And Dengue racks your bones with pains;
Or worse and worse you're suddenly taken
With something that sets your frame a shakin'.
Your temperature's up, your pulse is down,
Your stomach's disordered, your skin is brown;
Bang goes your head, you're off your trolley,
You forget your name—it may be Wallie
Or any other dam-fool fellow
That went down there to get the yellow
Fever and set the Cuban free
From bloody Spanish tyranee.
But as I was saying, lay soldier sick;
He'd hit the Spaniards many a lick.
But starved—the *Cubans* had eaten his pack;
Naked—*they'd* stolen the clothes off his back;
Been thirsty—asleep, *they'd* cribbed his canteen;
Such a general wreck had never been seen.
Lost was all but honor, as the Spanish say,
And his bones, he had them, as he lay
Half dead and thought of the far off time
When "Cuba Libre" had been the chime
Which church bells played, and "The Journal" as well;
And his manly soul took up the yell
"That the noble Cuban must be free,"
As I have said before, "from tyrannee."
So off he sailed on a transport smelly,
And fed on stuff that ruined his belly.
But all was forgot when with his band
He first set foot on the Cuban land
Of sunshine, summer, wretched Dagoes,
Tobacco, Plaintains, Concentradoes.

A Christian purpose sustained *his* steps,
His being was stirred to the very depths,
He knew *he* was right and the Spaniards—well
They were only fit for a trip to——.
And so the poor fellow fought and bled
And all but his bones, as I said, he'd shed.
But now as he lay on his narrow cot
And thought of his weary, sickening lot;
Of what a damnable fool he'd been,
Of the noble Cuban he hadn't seen,
Of the cowards and knaves he'd wildly sought
As allies and friends—Oh! sickening thought;
Of Garcia's army, beggars wary,
Who fought and died in the commissary;
Of his cowardly quitting when he saw
A stronger man lay down the law
That ended his soldiers' chance to loot;
T'was only a bluff, *their* trying to shoot.
And across his mind the whole procession
Of Cuban horrors in rapid progression,
The blistering sun, the mornings cold,
The poisonous water, the vermin untold,
The deadly fevers by thousand there
To which the human flesh is heir.
So hour by hour he thunk and thunk,
Till wildly raising himself on his bunk,
"It's a poor consolation," loud yelled he,
"But there're ten thousand other fools than me!"
Then back he dropped dead on his fever bed.
"That makes forty to-day," the doctor said.

FRANK DONALDSON, M.D.,
Rough Riders.

YELLOW-FEVER CAMP,
SIBONEY, CUBA, July 24, 1898.

A TEXT-BOOK UPON THE PATHOGENIC BACTERIA FOR STUDENTS OF MEDICINE AND PHYSICIANS. By Joseph McFarland, M.D., Professor of Pathology in the Medico-Chirurgical College, Philadelphia, etc. With 134 illustrations. Second edition, revised and enlarged. Philadelphia: W. B. Saunders, 1898. Pp. 497. Price $2.50, net.

This work, already excellent in the first, has been materially improved in the second edition. Dr. McFarland has treated the subject in a very practical and thorough manner, and the addition of the new chapters on whooping-cough, yellow fever, and certain technical methods is very valuable. The restriction of the work to dealing exclusively with the pathogenic bacteria will render it of particular use to the medical man, while the portions devoted to technic make it a good laboratory hand-book for the student.

If any criticism is to be made, it might be that the chapter on the preparation of culture-media is deficient in detail, especially regarding the titration methods employed for the standardization of media. The omissions of Moller's spore stain and of Van Ermengem's flagella stain are to be regretted.

E. H. WILSON.